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WHAT SHALL WE DO WITH OUR ALCOHOLIC INEBRIATES?

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The term inebriate in this paper will refer to all shades and degrees of inebriety. The person who is drinking moderately, or having his first drunk, is inebriated as well as the habitual drunkard. The difference between these two classes of inebriates is only in degree. The proper care of the alcoholic inebriate is a problem whose solution has had assiduous thought and profound study from time almost immemorial. Wise statesmen and broad philanthropists have given it their best energies. The medical profession has not been unmindful of its importance, as evidenced by the great mass of literature upon it published in medical journals, and by discussions at medical meetings. So thoroughly has this field been cultivated that nothing new or startling will be attempted in this paper by way of enumerating the evils of inebriety or recommending a plan for their cure. The continued existence of these evils, apparently without abatement, and a great lack of unanimity of opinion upon the best means to be used for their restriction and suppression, are a full warrant for the discussion of this question at every convenient opportunity; indeed, it calls loudly to the medical profession for an enlightened and persistent consideration, and an answer which will meet the exigencies of the situation.

The alcoholic drink-bill of the nations is appalling. It easily foots up into many billions annually. Concerning the death-rate from alcoholic inebriety it is doubtful if reliable statistics are obtainable. Estimates carefully made on this point by competent writers state that it carries to the grave yearly from 60,000 to 100,000 of our

citizens. The observation of the writer has led him to the conclusion that oftentimes deaths from alcoholic inebriety are reported by attending physicians as due to some other disease out of regard for the sensitive feelings of friends. Even though the above-estimated death-rate may be regarded as too large there is no doubt that the death-rate from this disease is very great, running up annually into scores of thousands; indirectly it is probably responsible for a far greater number than 100,000. It is the foundation of many diseased conditions of the nervous system, liver, heart, kidneys, lungs; indeed, the inebriate is likely to suffer from a perversion of nearly all the solids and fluids of the body. Not infrequently the inebriated life ends in insanity, idiocy, epilepsy, fatty degeneration of the heart, cirrhosis of the liver, paralysis, Bright's disease of the kidneys, phthisis pulmonalis.

The number of yearly arrests for drunkenness in all our large cities points to an increase of this disease. During 1894 in New York City there were made 19,538 arrests for drunkenness, as shown by records of the police department. In Great Britain in 1890 there were 173,036 convictions for drunkenness. In 1892 33,000 women were convicted for drunkenness in the same country. Dr. Crothers has estimated that a million and a half of the inhabitants of the United States are constantly suffering from alcoholic inebriety. It has been estimated that in Great Britain there are 700,000 habitual drunkards.

Oftentimes heredity plays a large part in the life of the alcoholic inebriate. The appetite for

alcoholic intoxicants received from some ancestor leads on to dipsomania and a thousand ills of the flesh, to distortion of the intellect and immorality.

Alcoholic inebriety is the prolific mother of crime and poverty; it disturbs the inalienable rights of the peaceful citizen and imposes a heavy burden upon the taxpayer; no other force is so potent in undermining the integrity of our national life. Accurate statistics relating to murders committed by alcoholic inebriates are not readily obtainable and are more or less unreliable. Coroners in reporting such cases are not always careful to state that inebriety was their genuine cause. Compilers do not always mention the cause of murder, even though it may have been stated correctly. Such statistics do not declare the whole truth, and hence are misleading. A prominent liquor paper concedes that nearly 500 murders are committed annually in this country as the result of alcoholic inebriety. Dr. Story states that the number of murders from drunkenness annually committed in the United States is 600. According to a high license journal 1130 murders were caused by liquor in the United States in one year. Remarks similar to the above are applicable to the difficulty of obtaining accurate statistics concerning those suicides which are committed by the alcoholized maniac. The real cause of the suicide is often buried under a wrong name. The reader of a daily paper of any of our large cities must be satisfied that the suicides from this disease are very numerous. Dr. Story places the annual number in the United States at 400. In 1893 in Prussia occurred 500 suicides among inebriates. Prof. Westergaard has said that out of 100 suicides in Denmark forty-four were notorious drunkards. In France 401 was the number of suicides from drunkenness in 1866.

Alcoholic inebriety plays an important rôle as a cause of accidents. The shipmaster, railroad engineer, trolley motorman, cable gripman, coachman, and all kinds of vehicle-drivers, inebriated by alcohol send many an innocent victim to death. The alcoholized brain of husband and father is responsible for many disfigured wives and crippled children. I forbear to present in detail more of the evils for which alcoholic inebriety is directly responsible. Their severity and universality are well known. By their enormity and ever-increasing outflow they are a constant

menace to the stability of the republic. Their restriction and extirpation demand the best services of physician, philanthropist and citizen.

For the requirements of this paper alcoholic inebriates may be classified in accordance with their drinking habit as follows:

1. The moderate drinker.
2. The excessive drinker.

The moderate drinker takes a class of liquor occasionally, say of wine or beer, with his daily meals or socially with a friend in the evening and once in a while some stronger alcoholic beverage. Perhaps, at long intervals, he may drink enough to become slightly intoxicated. As soon as his drinking habits have carried him to the point where his intellect and physical system have become visibly affected, as shown by his conduct, he may be properly classed with the excessive drinkers. Notwithstanding his moderation he is daily poisoning himself with alcohol; he is an inebriate and is suffering from the disease of alcoholic inebriety.

What shall be done for the moderate inebriate? As long as he keeps within the bounds of decency, has not become a nuisance, is able to take care of himself, his family, and his property intelligently, is not a menace to the peace and welfare of society, has committed no crime, the law cannot take any cognizance of his acts. He may be guilty of withholding from those naturally dependent on him, from society and from the State his best services, but for this the law cannot punish him and can place upon him no restraint. The total abandonment of the drinking habit is all-important for this class of drinkers. As long as the habit is continued, fuel is being added to a fire which is gradually destroying the physical and mental integrity. All reasonable methods which will accomplish this object should be adopted. In this matter the medical profession has an obligation which it should discharge with strict fidelity. In doing so it should become a wise counselor and teacher. On account of its anæsthetic property alcohol is a deceiver, and hence the moderate taker of it may not realize its damaging effects till he has been using it for many years. He may call his physician for a disease which is the result of his ingestion of alcohol. Then is the time when the wise and humane doctor, without being subject to the charge of

intermeddling, can and should clearly and forcibly point out to his patient the dangers of the road which he is travelling and the goal of a wretched life which he is sure to reach if he does not abandon his inebriating habit. The physician who does not adopt this course does not assume the high privilege to which his position entitles him, and fails to do his duty to the patient under his care : his professional obligation binds him to aid the weakened will by all forces at his command, and by proper regimen and medication to restore, if possible, the injured system to its former healthy condition.

By public addresses, magazine and newspaper articles, private conversation, and especially by example, the members of the medical profession can teach influential lessons on this subject to the communities in which they reside. They can show the poisonous nature of alcoholic beverages, their ravages upon the various organs of the body, even when taken moderately, their power to weaken the will and moral sense, their inutility in aiding the vital processes of the healthy body and in conducting to longevity, the danger that a moderate habit will lead to an excessive habit. The people will listen more attentively to such teachings from the medical profession than from any other source. This is a work to be done in behalf of hygiene and along the line of preventive medicine. The physician can find no broader field for the exercise of his noblest powers.

The excessive inebriate is generally the outgrowth of the moderate inebriate. He drinks to such an extent that the alcohol makes a profound impression on his system ; one or more of the diseases of which alcohol is the prominent causal factor, fastens upon him ; the nervous system is specially affected, as shown by unsteady gait, trembling hands, altered speech ; those phases of inebriety known as delirium tremens and dipsomania may follow ; mental alienation is oftentimes a sequence ; the victim may become demented ; the baser faculties are roused to increased activity and control the moral forces ; the man is overwhelmed by bad passions and may commit crimes of all kinds and degrees. The excessive inebriate is a diseased, degenerated individual. He belongs to the vast army of defectives ; he is a dangerous character, a constant menace to the welfare of home, the peace and good order of society ; at times he

may have the appearance of comparative physical health and mental soundness, may even attend to his business with a certain degree of exactness, but the hour when the alcoholic poison will assume dominion over him no one can foretell ; his relation to his environment is very similar to that of an insane person, and to a large extent he should be treated as are the insane ; indeed his case often assumes a form of insanity.

For the treatment of the excessive inebriate many plans and devices have been suggested—some being the product of dense ignorance and a barbarian age, others, the outcome of an enlightened spirit of scientific investigation. The inebriate will not receive the best treatment for restoration to physical and mental health until alcoholic inebriety has been clearly recognized as a disease both by the medical profession and the laity. All along the centuries the excesses of the habitual drunkard have been regarded as of sufficient importance to call for restraint and punishment. The severe laws of Draco punished drunkenness with death. In the early history of the Massachusetts colony each offence of treating and drinking to the health of another was punished by a fine of fourteen pence. In St. Petersburg at the present day, "Any one found drunk in the street is imprisoned from one to three days, and the person from whom the last drink was bought, if he can be found, is fined from five to twenty-five roubles." The present law of Minnesota punishes drunkards with fine and imprisonment. Massachusetts has a law which makes imprisonment the only punishment for drunkenness. In Sweden, if a man is seen drunk four times he is deprived of his electoral vote. By advice of its best physicians, Saxony has made drunkenness a crime.

During the last twenty-five years homes for the alcoholic inebriated of both a private and public character have been established in this country and in Europe. Dr. Crothers is authority for the statement that in 1887 there were fifty hospitals in America for the treatment of inebriety, with over 1000 patients, besides about 1000 under treatment in private families. In a few instances inebriate hospitals have been founded and are supported by public moneys.

The particular method of treatment adopted for the excessive inebriate has depended largely upon the view taken of his condition. He has been

regarded as diseased, as vicious and as a criminal. The physician who makes inebriety a specialty insists upon medical treatment; the reformer advocates moral suasion and a strengthening of the will by educational influences; the magistrate adopts a system of fines and imprisonment. It is my belief that the alcoholic inebriate has all three characteristics. He is suffering from disease, has adopted a vicious habit, and not infrequently commits crime. His disease, which is the result of heredity or a vicious custom, demands the serious attention and profound skill of his physician. In its early stages it should not be neglected, as is too often the case. As a general rule neither the inebriate himself nor his family apprehends any danger until his inebriated condition has become chronic and he has gone far on the road which leads to delirium tremens or dipsomania or dementia; indeed, the suggestion that he requires any formal or persistent treatment in the early period of his malady is met with a positive denial. But this stage of the disease is the most hopeful for restoration to former soundness of mind and body; this is the time for friends and physicians to be alert, for *now* considerate care and treatment may save from disappointment and ruin. Treatment in a hospital specially adapted for the purpose has many advantages over treatment at home. The patient will be placed outside of an environment which has contributed to a continuance of his vicious habit, he will be prevented from transmitting any of his characteristics to a future generation, he will be kept from committing crime, he will be under the superintendence of physicians who have made his disease a special study; he will have the constant care of attendants who have been trained for special work. But hospital treatment will not be of permanent utility unless sufficient time has been given to it for a thorough restoration to soundness. The custom of confining an inebriate to a hospital for a single month, or in many cases for several months, fails, as a general rule, to accomplish the object of the confinement. Not infrequently several years of treatment are needful to repair the damages of many years of indulgence. Statistics of hospital treatment show permanent cures in from one-third to one-half the cases. Incurable cases of alcoholic inebriety should be placed in a hospital for incurables.

No case of drunkenness should be allowed upon the public streets or in a public place. A drunken person is a nuisance and dangerous to the public welfare. Although the habitual drunkard may never have been disorderly, nor in any way disturbed the peace, no foresight can determine how long he will be free from criminal intent; at any moment he is liable to commit an assault or murder. All persons when drunken in public should be arrested and brought before a magistrate for trial. The long-continued and almost universal practice of imposing a fine and committing to jail for a few days should no longer exist. In cases in which no crime has been committed the inebriate should be sent to an inebriate hospital for treatment until he is cured. If a crime has been committed an expert commission of medical men should determine whether the inebriated criminal was responsible for his crime; if responsible he may be incarcerated for a term of years in an institution where he can receive proper treatment for the cure of his inebriety. Every case of alcoholic inebriety brought before a magistrate should be investigated by a medical commission appointed for the purpose and upon its report should be based the magistrate's decision. The records of our own and foreign courts show through many years of trial that punishment has had a very meagre outcome in restoration to health and permanent moral improvement. Such a course of procedure as is adopted in most of our courts is a relic of the dark ages and should be tolerated no longer by an enlightened people. Field says: "The records of the workhouse show that it has no effect to deter men from drinking and one woman was sentenced twenty-eight times in twenty-five months." Dana states that "The number of persons arrested for intoxication in New York City every year is about 30,000; most of these are fined or sent to the Island or both." Henry O'Neill, of Belfast, Ireland, mentions a woman fifty-five years of age who was fined for drunkenness in a public court in that city and who had been previously convicted ninety-two times; also a woman forty years of age who was fined and who had a previous record of 140 convictions; also of a woman who was fined and who had been before the court previously 170 times.

In looking over our country I am forced to the conclusion that as citizens and physicians we are

doing far too little for the inebriated portion of our population. Since by inhuman laws we permit the sale of alcoholic intoxicants as beverages and thus encourage inebriety surely we ought to repair so far as possible the damages for which in large measure we are responsible. It has been said that a government should enact such laws as will make it hard for citizens to do wrong and easy to do right.

There seems to exist no good reason why, both from private and public sources, the insane should have larger and more humane provisions than the alcoholic inebriate. The comparatively few private institutions for the cure of inebriety scattered through the country and the less than half a dozen public inebriate hospitals should be supplemented by at least one such hospital maintained by public expense in every State; and, in many States there should be several. For the reformation and care of their inmates these hospitals should be equipped with all the appliances which the most advanced thought of the age can suggest and money can supply; including a gymnasium, lecture-hall, reading-room and library. With each one should be connected an industrial department, and work by every inmate should be compulsory. A military training school may also be a useful adjunct to such an institution. For the superintendence of each should be selected a physician who has made inebriety a special study and has a practical knowledge of the best methods of its cure.

The cost of erecting, equipping, and maintaining such hospitals the State would soon save in the lessened expense attached to murder, suicide, theft, arson, accident, disease, poverty caused by the inebriate permitted to run at large. To these institutions should be sent all excessive inebriates except such as belong to families that will convert their own homes into private inebriate hospitals. Those inebriates who will not enter a hospital voluntarily should be compelled to do so by the strong arm of the law. The inebriate without estate who is under State care should be supported by State moneys. His family also should have necessary aid from the State during detention. This method is in vogue in one of the cantons of Switzerland. These establishments should resemble as far as possible well-ordered homes.

The author of this paper does not wish to be understood as condoning the crimes of responsible

criminals, but as recommending the abandonment of many barbarous methods now in use for the punishment of the alcoholic inebriate, and as advocating a reasonable method of treatment for his reformation and cure in consonance with the enlightened and scientific spirit of these last years of the nineteenth century.

The special thoughts which have forced themselves upon my attention in the study of this subject may be summarized as follows:

The importance of this question is shown by the magnitude of the evils of inebriety and their disastrous effects upon individuals, communities, and the nation.

The prime factor in the treatment of both the moderate and excessive inebriate is the total abandonment of the drinking habit.

For many reasons the alcoholic inebriate can be treated more successfully in an inebriate hospital properly equipped and wisely managed than in any other place.

Compulsory committal to an inebriate hospital and detention therein until cured, should be made lawful for all excessive alcoholic inebriates, who will not enter such an institution and submit to proper restraint voluntarily.

The prevailing mode of punishing the alcoholic inebriate by fine and incarceration in an ordinary jail or prison should be abandoned.

The cases of all alcoholic inebriates who are arrested and brought before a magistrate, should be disposed of in accordance with the report of a medical commission.

The inebriated criminal found responsible for his crime should be confined to an institution where he will receive proper treatment for his disease.

State care and control of the alcoholic inebriate should be the persistent policy of every State in the Union.

The medical profession should make a vigorous protest against placing in a cold, damp cell of a police station, without medical care, those persons who are found on the street in an unconscious or semi-conscious state of drunkenness. Such cases require warm, comfortable quarters and medical attendance.

The alcoholic inebriate will not receive appropriate treatment until the prime workers in the fields of medical science and philanthropy have recognized him as a defective, diseased, dependent, dangerous member of society.

ACUTE BRONCHO-PNEUMONIA.

BY P. D. GOLDSMITH, M.D., PETERBORO', ONT.

This disease is so prevalent and so fatal in this country at this season of the year, that I venture to bring it before you for discussion. It is an inflammation affecting the mucous membrane lining, the bronchial endings, bronchioles and air cells in connection with it, making up a lobule. In severe cases the inflammation is not confined here but may extend so as to include any part of lung tissue. This diseased condition never begins in air vesicles, and it therefore is bronchial before it is pulmonary, and its extension from the finer tubes to alveoli is very easily and sometimes very quickly accomplished.

It forms the most serious and fatal complication of measles, influenza, whooping-cough and diphtheria. It is most frequent in children under two years, and during the winter months, when bronchial affections predominate. Quite commonly met with in old people who are debilitated from any cause, especially from catarrhal affections and chronic Bright's disease, but much more frequent in the young, especially before the fifth year; the most dangerous period being anytime before the end of the second year. Age is, therefore, an important point in reference to fatality.

Exposure to cold, changes of temperature and humidity are very common exciting causes. Unsanitary surroundings and debilitated conditions predispose. It certainly seems most unwise that young children should be allowed on the streets in quite cold weather with dress well above the knees and short socks. Inhalation of irritating particles and gases, operations about mouth and nose favor the production of this malady. Every acute and chronic affection of much severity gives conditions favorable to the production of broncho-pneumonia.

The very sick expectorate badly; mostly lie on the back and thus favor the accumulation of secretions. Pieces of food, fungi and bacteria also collect. Decomposition and bacteria developments readily take place. Now, in the benumbed condition of the very ill these collections are

badly got rid of and during inspiration may be further and further drawn into the bronchi or gravitate to dependent parts till the alveoli are reached and broncho-pneumonia results. It is in this way that this disease is produced in typhoid fever, erysipelas, neuralgia, chronic diarrhoea, etc.

This inhalation form of the disease is also readily produced in bulbar affections, bronchiectasis and hæmoptysis. Tubercles will produce a very fatal form of broncho-pneumonia. The badly housed, badly fed, badly cleaned, scrofulous, rickety, weakly children, are the first to fall victims. It is nearly as fatal a disease among children in cold damp, weather as "intestinal indigestion" is during the hot, dry months of summer.

In the young, the air sacs are much like dilations of bronchial endings, and their structure is loose and yielding. Epithelium is readily shed and re-formed. Connective tissue is delicate and tends to abundant cell proliferation. Peri-alveolar and peri-bronchial inflammation will produce pressure. Congestion of vessels and swelling of mucous membrane all combine to produce obstruction. Tenacious mucus in early stages acting as a valve, and mucus and pus in later stages, with weakened muscular action, aid in the production of obstruction and collapse. The disease may advance rapidly, and quickly involve large tracts of lung; or it may advance slowly and gradually, taking weeks of time. Its course is usually very irregular. I could not easily exaggerate the great importance of simple bronchitis in young infants. Increased liability to recurrence must always be expected, and it must be remembered that it is very easy for a severe case of broncho-pneumonia to come out of a mild case of simple bronchitis. Many a case of broncho-pneumonia would be avoided, if simple bronchitis had more attention. Not infrequently, we are called hastily to see a child in convulsions, and you find a temperature of 102° or 103°, pulse 140, respirations 50. You find the child has been ill two or more

days with simple bronchitis, but yet has been playing around the house and perhaps out of doors, and, from exposure, has got an extension of the disease,—and you have broncho-pneumonia out of a simple bronchitis. See this child in seven or eight hours more, and you find temperature still higher, pulse more rapid and respirations very frequent, and a constant hacking cough, expiratory moan, anxious facial expression, and great desire for air. Usually, the change from simple bronchitis to broncho-pneumonia is not so sudden as this, nor is it usually marked by a convulsion.

It is very usual, however, to find that a cough has existed for a few days before the serious illness began. Temperature ascends irregularly, and often reaches 105°. Respiration becomes very rapid and irregular—70, 80 and even 90 is not uncommon. Pulse reaches 160 or 170, or 200 per minute. Some diarrhœa and vomiting at beginning of acute stage; vomiting is not lasting, but diarrhœa may continue.

When fresh areas of lung become involved and collapsed, breathing is more difficult, and all symptoms are much more severe. If areas are large, temperature may fall, cough cease, skin get moist and cool, the pale countenance gets livid, and death easily results. Death may come from the exhaustion of prolonged fever and continuous struggle for breath. The heart does not always stand well the severe strain due to difficulties of respiration. Restless delirium, convulsions, coma and death in a few days.

The disease is always serious, and more so the younger the patient and the greater the amount of consolidation. Invasion of successive portions of lung is so common, that what may at first appear a very mild case, may very soon become a serious and fatal one. Temperature of 105°, if long maintained, is not favorable; very fatal when following measles and whooping-cough. Lowered temperature, lividity of countenance, cool moist skin during collapse, are not good symptoms. A vigorous child will sometimes pull through a severe attack; while a delicate, rickety, scrofulous child will succumb in a mild case. Diarrhœa, inability to take nourishment, stupor, weak, irregular pulse, are bad symptoms. Ability to cough secretion above glottis, is favorable. In old people and those very ill from any disease, inspiratory pneumonia is very fatal.

Good nursing and proper care of children would prevent many a case of broncho-pneumonia. No case of simple bronchitis, or any catarrhal affection, should be allowed to run without proper treatment. The extraordinary carelessness in the care of children of the poorer classes, and even by those in better circumstances, makes it a wonder to me that this disease is not more common and fatal. Kind Providence has certainly given their little bodies wonderful powers of resistance. Cleansing the mouth, throat, teeth, lips, etc., during very prolonged and severe illness, with some pleasant disinfectant, as boric acid and glycerine and water, might prevent many a fatal case.

When recovery does take place, it is slow, and convalescence is prolonged. Absorption of inflammatory products takes much time.

Favorable symptoms are lessened cough, less frequent respiration. Pulse usually keeps pretty rapid, even after temperature goes down. When disease follows measles, its duration is usually shorter, either to recovery or death.

The prevalence of influenza makes broncho-pneumonia more common at all ages. Emphysema and disease of heart give a condition in which broncho-pneumonia can readily step in to end the scene.

In diagnosis, it is often impossible to distinguish this affection from simple bronchitis, in the earlier stages; but, usually, symptoms are too severe. Urgent dyspnoea and pulmonary distress are too great for bronchitis. Incessant cough, rapid pulse, high temperature, and frequency of respirations, aid the diagnosis very much, before consolidation comes on.

In severe cases before physical signs occur the diagnosis is between broncho-pneumonia and lobar pneumonia. Here age will aid, as broncho-pneumonia is mostly before fifth year, and lobar pneumonia after that age. The older the child the easier the diagnosis. Mode of onset is quite different. This disease begins insidiously, very often after a simple bronchitis has existed for a few days or measles whooping-cough, or influenza has been the trouble. Lobar pneumonia begins abruptly, attacking the patient while in good health. Temperature has a similar mode of onset quite gradual in the one, and in the other reaching 104° or 105° in just 24 hours—may get as high in broncho-pneumonia,

but takes more time, and is more irregular. Respirations are more labored and paroxysms of dyspnoea more common in broncho-pneumonia.

When physical signs become developed and disease more advanced lobar pneumonia will be found a one-sided disease, while broncho-pneumonia is bilateral, evidences of consolidation being found in both lungs. Consolidation in lobar pneumonia is in one side, and is considerable in amount and easily found. Amount of consolidation in broncho-pneumonia varies greatly, sometimes in scattered patches, or so centrally placed as to be undiscoverable, or in large areas resembling lobar pneumonia. It is usually symmetrical, and affects chiefly posterior margins of both lower lobe and lower margin of middle lobe of right lung. Consolidation may be most evident along each side of spine. Different portions of lung may be in different stages of the disease at the same time. Lobar pneumonia terminates quite suddenly in seven or eight days, while broncho-pneumonia has a much more gradual ending, and the disease is much more prolonged.

But little can be learned by auscultation or percussion in early stages. Dry râles in one apex may point to lobar pneumonia. Moist râles heard all over back may be heard in both diseases, but as the case advances consolidation in one lung points to diagnosis. In broncho-pneumonia evidences of consolidation in both lungs may be made out, but not so early; comes on slower.

Râles of all sorts and sizes are heard early in broncho-pneumonia, but later persistent sub-crepitant râles in one or more spots. To say whether the case is of simple or tuberculous origin is often very difficult, and in many cases impossible. A very lasting case looks suspicious. Family history may aid. If the disease is in the apex or central parts of the lung, with evidence of softening, it points to tubercle. In the vomited matter pieces may be picked out for examination. Tubercle cases are probably more common than we are aware of.

Treatment.—The great fatality and frequency of cases of this disease render the treatment of much consequence, and tries to the utmost the skill and patience of the physician. An unfavorable prognosis should always be given. It so often occurs that those you think will get well, and who are going along nicely, get a sudden

extension of inflammation, collapse and death follow rapidly. It also fortunately happens that apparently hopeless cases get well. However desperate the case seems to be, hope should be entertained, and the case fought out vigorously. A comfortable, well-ventilated room, free from dust and noise, and containing a grate fire; cleanly surroundings; equable temperature, 65° to 70°, free from draughts. Air in the room should be kept thoroughly moist by using a bronchitis kettle, in the water of which should be placed bicarbonate of soda, and later this should be changed to Friar's balsam and spt. turpentine. If the room be large a tent should be placed about the child, so that the air could be kept sufficiently moist. Locally a light jacket-poultice of flaxseed meal with a little mustard sprinkled over the face of it to keep the skin a little red. When lightly made and kept snugly applied, good seems to result, and the little sufferer becomes more comfortable and breathes easier. I would not continue poultices longer than 24 or 48 hours, and would then use a jacket of cotton batting made to fit and kept snugly to skin, and to cover whole chest. Intelligent nursing and many little attentions will add to child's comfort. A cup of cold water constantly at hand, and frequent little sips are grateful and beneficial. Keep lips, teeth, etc., clean and moist. Daily sponging without exposure or disturbance. Disease is sure to be somewhat prolonged, and the child's strength and endurance will be most severely tried, hence, feeding and thorough support must be carefully looked after. Food should be given regularly at stated intervals, and as digestible and as nourishing as possible. Milk stands first while it agrees. Egg albumen dissolved in water with sugar and brandy is very good. Beef juice is valuable here. Broths and soups often do well. These foods may be varied or mixed and those given which agree best. May be given by the rectum at any time stomach seems irritable, and stimulants may be added if needed. Brandy to be given as case requires, and may be needed from the first, and often in heroic doses before the case is over.

At first if there is constipation and coated tongue, repeated small doses of calomel and soda are indicated till bowels are well moved, and if the child is feeble may aid by an enema. Keep bowels regular by enemata or small doses of

calomel. If there is diarrhœa, I would use bismuth and Dover's powder. An important point to aim at just here is to give something to lessen the viscosity of the mucus, and thus aid its expulsion. Ipecac will do this better than any other drug we have, given in small repeated doses well this side of nausea. Benzoate of soda stands close to ipecac, and has served me well frequently. Warm spray, containing soda, glycerine and carbolic acid made to play before child's face, so as to be freely inhaled, will aid decidedly in liquifying and getting rid of this mucous. Occasional drinks of warm milk, soda, and brandy will assist in the same way. To modify this constant cough, pain and restlessness, opium is indicated, and in proper doses is safe and useful. Much caution must be used that it does not interfere with expectoration. Elimination by the kidneys is needed, and for this I would give pot. cit. and spt. ammon. aromat. This will constitute a good mixture, made pleasant, and given every three hours. If the case is very sthenic and not very young, a few doses of aconite in spt. Mindereous would lessen arterial tension and heat very well. Any feebleness of pulse to be promptly met by brandy. Under these measures the disease may advance to a favorable ending with no further trouble.

You are not always so fortunate, however; increase of cough, more rapid breathing, much rattling in air tubes, color not so good, and more restless, all point to increase of obstruction. An emetic of ipecac to clear tubes, and more free

stimulation are indicated, mustard to heart, ether or brandy or strychnine hypodermically. A more stimulating expectorant of ammonia, senega and strychnine may replace above mixture. Temperature, if very high, may be kept at a safe point by frequent cool sponging, fanning, change of position, light covering—place child in a bath of 100° and lower it 10 or 12 degrees. Quinine may be tried, but cool bath better, or applying cool damp clothes, or sprinkling cool water over body, and this last also induces deeper breathing, and aids vitality and lessens danger of collapse. These methods will need repeating under careful supervision for several days.

Some children bear heat better than others. A temperature of 102 or 103 in one child will produce a greater effect than 105 in another. Restlessness and delirium may need sedatives, as ammonia, ether, injections of chloral, quinine, musk. Must continue energetic support to obviate, if possible, tendency to respiratory failure, and strychn. and tr. cinchona co. are valuable, hypodermics of ether, brandy, caffeine, cold or hot douches, mustard over heart. Go on while life lasts. Digitalis should be added to last mixture. When convalescence is established, syr. ferri. iod., and cod liver oil will do good. Give for a long time till health is quite restored. If spots of consolidation remain, may paint on tr. iodine; forced respirations, change of air are good. Be careful of cold and damp, and give plenty of time for recovery.

SURGERY

IN CHARGE OF

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THE OBJECTS AND LIMITS OF OPERATION FOR CANCER.

In the Lettsomian Lectures for 1896, W. Watson Cheyne, of London, discusses operations in cancer, by which term he understands the carcinomata, the essential feature of which is continuous and excessive growth of epithelium. The primary object of operation in cancer is, of course, the prolongation of the patient's life and the alleviation of his local trouble, and Mr. Cheyne asserts that these results are in most cases best attained by aiming, wherever it is possible, at the cure of the disease. Until quite recently, and even now, many surgeons approach operation in these cases impressed with the view that real cure is practically hopeless, and that with few rare exceptions the most that can be expected is prolongation of life for a variable length of time. They, therefore, oppose elaborate and extensive operations which in themselves must involve considerable risk to life, and are content with fairly free removal of noticeable disease; in some cases, indeed, they do not even go so far. Mr. Cheyne, however, strongly urges the view that the first question to be kept before us in investigating a case of cancer, is, whether there is any possibility of curing the disease or not. Such a point of view makes a great difference in the operation, for it is not then sufficient to remove only noticeable disease, but it is necessary to take away as far as possible the parts in which disease may have become disseminated, although still unrecognizable,—in other words, possibly infected lymphatic areas. Thus, if the skin is affected, a considerable portion around must be taken away, and this is the more necessary where the infection of the skin has come from beneath,—as, for example, where cancers of the breast reach the surface,—for the dissemination in the cutaneous lymphatic plexus is often under these circumstances very rapid and extensive, and this is probably due in part to the larger size of the deep cutaneous plexus, which will, in the latter case, be first involved. Again, where muscle is infected, the cancer-cells are very rapidly and early driven along the lymphatic vessels of the muscle, and, even though there only may be one visible nodule in the muscle, the whole or the greater part of it

must be looked on as suspicious and must be removed if there is to be anything like certainty in attaining the object of the operation,—namely, the patient's cure. Again, as regards the lymphatic glands, we know that from a very early period they become affected, and that, of course, without any visible enlargement in the first instance, and, in addition to this infection of the glands without enlargement, plugs of cancer-cells very often stick in the lymphatic vessels on their way to the glands. Hence it is necessary in all cases where the disease has lasted any time, or extended at all deeply, not only to remove the primary mass freely, but also to take away the whole lymphatic area up to and including the nearest lymphatic glands. Thus, the operation performed with the object of curing the disease becomes a much more extensive one, and consequently much more serious than that which simply aims at getting rid of the main trouble for a time and prolonging the patient's life.

The limits of the radical operation are where there is no reasonable prospect of removing the whole disease, or where, together with a very poor prospect of success, there is a very high mortality from the attempt. In such cases operation should not be considered at all.

But, even in cases where hope of cure or marked prolongation of life by a radical operation is out of the question, operation may sometimes be advisable with the object of removing symptoms which are immediately threatening to life,—such operations, for example, as tracheotomy, colotomy, etc.; or, in the second place, with the object of taking away the primary disease from a part, such as the mouth or throat, where its continued development means intense pain and trouble, and thus of substituting for these troubles an easier death from exhaustion. A *sine qua non* of such operations must, however, be that they are reasonably free from immediate risk; and, with regard to the second class, that there is a prospect of attaining the object of the operation,—namely, the entire removal of the disease from the part operated on. Mr. Cheyne does not think that a dangerous operation is allowable for simple relief of symptoms, however proper it may be, if a cure may be hoped for.

There are thus two different objects to be held

in view, and two different questions as regards operation which we must bear in mind in treating a case of cancer,—namely, (1) can we reasonably hope for a cure? for, if we can, a serious or dangerous operation is permissible; or (2) cure not being possible, can we decidedly ameliorate the patient's condition by operation, such operation, however, not involving any great risk of life?

As regards the limits of operation for cure in breast cancer, therefore, the author would exclude from operation (1) cases of cancer *en cuirasse*; (2) cases in which there is a large mass in the axilla involving the nerves; (3) cases in which large glands can be felt above the clavicle; (4) all cases in which secondary cancers already exist elsewhere.

In none of these instances is there any reason-

able prospect of cure, and there will be but little to be gained by subjecting the patient to the elaborate operations to which he has referred. Short of these conditions, however, he thinks that the patient ought to have the chance of operation.

While the results of intervention are steadily improving, the proportion of cases which succumb to cancer is still considerable, and will not be much reduced till patients and doctors understand that there is a good chance of radical cure from early and thorough operation in mammary cancer, and that a suspicious lump in the breast, especially in elderly women, is not a thing to be watched, for over 90 per cent. of the swellings of the breast in elderly women are cancerous.

Mr. Cheyne gives the following statistics of breast operations by different surgeons:—

OPERATOR.	Total Cases.	Mortality.	Known Recurrences or Deaths from Metastases.	Cures.	CASES DONE MORE THAN THREE YEARS BEFORE THE REPORT.				No. of Cases Cured.
					Total.	Mortality.	Recurrences, or Metastatic Deposits.	Cures.	
		Per ct.	Per ct.	Per ct.		Per ct.	Per ct.	Per t.	
Fischer, Henry	147	20	55	8	86	22	59	15	13
Esmarch, Oldecop	229	10	44	10	171	13	(?)	14	25
Before 1863					47			4	2
After 1863					124			18	23
Rose, Fischer	61	26.3	(?)	6					4
Billroth, Winiwarter	143	23.7	62	5	89	22	68	9	8
Trendelenburg, Neuendorff	97	11	54	2	50	12	68	4	2
Lücke, Dietrich	110	7.6	(?)	9	69	8	60	13	9
Czerny, Schmidt	150	4.4	(?)	5	82	6	46	8.5	8
Kronlein, Horner	144	4	58	18	121	4	68	20	25
Küster, Schmidt	222	10.8	(?)	9	132	14	(?)	15	20
König, Hildebrand	135			17	118	9	61	20	23
Bergmann, Eichel	114	4.3	62	11	43	7	62	30	13
Mitchell Banks	82	12	26.8	21.9					18
Halsted	50		43	4 or 8	11		54	18 or 36	2 or 4
Watson Cheyne	61	1.6	31	19.9	21		42.8	57	12

Contrary to the usual dictum, it is now found that the most favorable of all cases for operation are those of atrophic scirrhus, and the more nearly a cancer approaches the atrophic form the greater is the chance of permanent cure. Cheyne believes that the malignancy of the cancer in the individual cases has a great deal to do with the favorable result of operation, more than the early period of the operation; but that, expressed in other terms, is only to say that in the less malignant forms of cancer the disease does not diffuse itself as rapidly or widely, and that by an extensive operation we have a better chance of getting beyond it. A patient with a small tumor which has been noticed for several months, which has not markedly in-

creased in size, and in connection with which there are only small glands in the axilla, has a much better chance than one who has found a tumor quite recently which is noticeably enlarging, and in which the axillary glands are of considerable size. In the former case the probability of getting beyond the disease is great on account of its slow spread; in the latter the reverse is the case. Hence, while the sooner a cancer of the breast is radically removed the better, one cannot say that the chance of cure is necessarily proportionate to the early period of the operation; in any case, however, the chance of cure of necessity depends on the thoroughness of the operation.—*Brit. Med. Jour.*

SURGICAL TREATMENT OF HARELIP AND CLEFT PALATE IN CHILDREN.

In a paper on this subject, read before the N. Y. Academy of Medicine, Dr. D. H. Goodwillie says: Harelip is the result of imperfect intrauterine development. The upper lip is developed from a central and two lateral points. When these points fail of union a fissure results. The fissure may be on one side or on both; it is rarely in the centre. It may be accompanied by fissure of the hard and soft palate. In correcting the deformity the bone lesion must be operated upon as early after the birth of the child as its condition and the circumstances will permit, and before ossification takes place to prevent moving the bones into normal position. He had operated as early as the twelfth hour after birth. This first important step in correcting the deformity is accomplished by mechanically forcing the maxillary and nasal bones into normal position and closing the harelip and soft palate. Before entering into the details of the operation, the author described the orbicularis oris and the muscles inserted into it and running out in various directions, particularly those in the upper lip. There was less change in these antagonistic muscles in infants than in adults showing harelip.

The bony framework having been restored, the further operation of closing the lip became not only simplified, but the result was better. It was his custom to follow the one step immediately by the other. Every divided fibre of the orbicularis oris must be joined to its fellow in order to restore its normal action and the force of the levator muscles inserted into it. This could be best accomplished by union in the centre of the lip, whether in single or double cleft, and he made his incisions accordingly by the removal of V-shaped pieces. He used special plates for holding the fibres of the orbicularis on both sides evenly, and inserted a pin through the soft parts down into the bone outward from the nose on each side, in order to prevent action of the antagonistic muscles inserted into the orbicularis. The mucous membrane and skin of the lip wound were united by catgut. The retaining-plates and pins held the parts until union had taken place. The wound was sealed with antiseptic collodion or rubber tissue. If the bone and soft tissue were not supported during union, some of the fibres of the orbicularis might give way and cause deformity.

In bad cases there was pouting out of the under lip. His method was to take out a section of the pouting mucous and submucous tissue down to the orbicularis and close the wound with catgut. In order to remove a symmetrical section, he used a lip-gauge of his own devising.

After pointing out different varieties of cleft hard palate, he said all bone should be preserved, sacrificing only enough to freshen the edges when closing the parts. The operation should be done before the second month. When the lip alone was involved, it should be done before the child began to speak, or at two years of age. In fissure of soft and hard palate the judgment of the surgeon would decide whether to close the former first or do both at one sitting. In his experience little cutting was required if one began soon after birth to stretch the muscle toward the septum from both sides. The child should be in good condition and the tissues should have thickness in order to secure success. Nasal deformity might also exist and should receive attention. The septum might be absent; there might be hypertrophy of turbinated bones, even to the occlusion of the nares. In the further description of his mode of operating in different classes of cases, Dr. Goodwillie showed an instrument which served the double purpose of a tongue depressor and of a tube for administering chloroform. The spray of the anæsthetic playing from the upper surface of the depressor came directly in contact with the parts to be anæsthetized.

Dr. Robert Abbe opened the discussion. No other operation so taxed the ingenuity of the surgeon as those upon the mouth and lips of infants. The beginner often had bad results by reason of his rashness. While he could see some advantage in certain of the instruments, he thought there was a greater display than was demanded in most cases. The method advised, of making a double harelip of a single one, cutting some of the lip away on the sound side in order to bring the two together to make a central scar, seemed to the speaker not at all necessary. Regarding fixing the lips by the plates, he asked if they did not leave a tender scar. He had found that any form of pin or suture transfixing the lip would produce a tender scar if left in longer than three or four days. This was fully as long as he left two in, one placed at each labio-nasal fold and fastened taut by adhesive plaster at the zygoma, the purpose being to maintain the broad muscular edges during primary union. In fissure of the hard palate, in some infants much could be done toward modelling the jaw. The fingers would often succeed without instruments. He had once thought that palate operations ought not to be done; that the defect should be filled with a plate fitted by a dentist. But such an apparatus was troublesome and expensive, and he had come to favor making repair by operation. Venous hæmorrhage could be controlled by pressure. He made no effort to avoid dividing the palatine artery, as it would be likely to be cut anyway while separating the soft parts. The earlier one operated the better. He had obtained an excel-

lent result in one case two days after birth. The soft parts tended to model the hard parts, hence the lip operation ought to be done early.—*Med. Rec.*

TALIPES VARUS.

BY DANIEL LAFERTE, M.D., DETROIT, MICH.

The great diversity of opinion entertained among surgeons concerning the proper method of handling cases of club-foot seems sufficient excuse for asking your attention for a few minutes to the consideration of some practical points connected with this subject. It is a subject that has been much discussed, both as to its pathology and treatment.

The cause of the congenital variety, which in nine cases out of ten is of the varo-equinus type, is probably the forcible contracture of the muscular walls of the uterus upon the feet of the foetus as it lies in the womb in its usual position of flexure of almost all the points of the body, the feet at the same time being rotated inward. The other varieties of talipes, especially valgus, are now rarely met with as congenital affections.

When we come to consider what shall be done for this class of cases, whether congenital or acquired, and at what time our treatment shall commence, and in what that treatment shall consist, we arrive at that point where there are many divergent views.

The majority seem to favor the plan of commencing the treatment immediately after the birth of the child, by manipulation and fixation, so that the various structures binding the foot in its vicious position may be the more easily stretched. Brilliant results are claimed to have been obtained by this early and persistent treatment. I have no doubt that such is the case in the hands of some surgeons, but it requires an enormous amount of time and patience on the part of the surgeon and relatives. It means at least several months of constant treatment and careful watching until the child arrives at that time of life when he begins to walk, and thereby we have the weight of the body to assist in keeping the foot in the corrected position. Even this may not be sufficient, and after carefully watching over our patient month after month and year after year, he returns to us with a relapse of his trouble.

In these relapsed cases it is not advisable to resort to any treatment short of an operation, dividing the several structures that offer resistance. If we still cling to the method that has been fashionable for so many years, those structures will be divided under the skin. In cases accompanied with much inversion of the foot it is advisable to cut the tendons of the anterior tibial, posterior tibial, and long flexor of the toes, leav-

ing the tendo-Achillis intact, as it will assist in steadying the foot in the efforts at bringing it around in a straight line with the leg. When this is accomplished the tendo-Achillis is severed, when the heel is usually readily brought down. When the deformity is not severe, as when there is not much concavity along the inner border of the foot, division of the tendo-Achillis alone will suffice to remedy the deformity.

This subcutaneous division of structure has not proven particularly successful in my hands. Too many of my cases have come back, perhaps, after several months with their deformity as bad as it was in the first place. Neither has the treatment by manipulation and passive motion, commenced immediately after birth and persisted in for some months after the foot had been brought around in a normal position, been attended with very flattering results. I have in mind now a case in which I commenced the treatment a few days after the birth of the child and kept it up persistently until the child was a year old when, the feet having been straight for several months, treatment was discontinued and the parents instructed to keep a close watch, and to report immediately if any tendency to relapse was noticed. They did as well as most parents do under similar circumstances, and brought the child back to me when the feet were as much deformed as they were in the first place.

That is only one of several cases which turned out similarly in my practice. I believe the skin on the inner border of the foot, the anterior portion of the internal ligament and the superior astragalo-scapoid ligament have much to do in producing relapses. No matter how much they are stretched there is a great tendency to contraction.

Phelps undoubtedly recognized this fact when he advocated free division of all the opposing structures from the inner border of the foot in cases of varus. This is the operation that I have almost exclusively performed for the past four or five years, even in children immediately after birth, and I have yet to see the first case of disastrous results following its adoption. I am aware that it is recommended not to resort to this open operation in children under one year of age, but I look upon it as the only method worth considering when an operation is demanded. It is so easily performed, and accomplishes the object sought so thoroughly, with so little mutilation of the foot that it must be looked upon as a perfectly safe procedure.

Phelps' method is especially adapted to old relapsed or neglected cases. In those it is my belief that we can accomplish much more by this open method without any risk of evil consequences than we can by the subcutaneous division of the several tendons and resort to forcible traction by

means of appliances, which are liable to cause bruising and sloughing of the soft parts, or by resorting to excision of the astragalus or cuboid bones, or taking out a wedge-shaped piece of the tarsus from the outer border of the foot. By opening up the mediotarsal joint we accomplish in three months what it would take perhaps three years to achieve by any other method.

I have here a patient to show you, aged ten years, who was born with double talipes varus. The child, the mother tells us, was treated faithfully for his deformity by the family physician every day for a whole year and every other day during the next year. The plan pursued here was the usual one of manipulating with the hand and applying splints. He was still wearing braces when he applied for treatment at the Children's Free Hospital, presenting a severe form of varus as you see in this photograph which I show you. We operated upon this boy on February 23rd, 1895, by Phelps' method and discharged him May 4th, 1895, in the condition in which you see him now. No splints of any kind have been worn since the wound has been healed. He has been able to get along with a pair of ordinary shoes.—*Phy. and Surg.*

SURGICAL MORALS.—We borrow the above heading from an article by Dr. David W. Cheever in the *Boston Medical and Surgical Journal*, in which the author most felicitously treats of surgical responsibility and of the grave questions that are constantly arising in the surgical mind in regard to when to operate, and when not to, and when to stop and not to stop.

As regards responsibility, we may state that this is a factor inherent to all surgical work; it is ever present, and its effect upon the surgical mind depends upon the degree in which it is associated with other mental and moral processes. The average individual of no medical training is possessed of hard and fast notions in regard to the cold-bloodedness and indifference of the surgeon, and it were a waste of time to endeavor to dispel them, erroneous though they are. Long ago, the ideal surgeon was described as one "with a hand like a woman and a heart like a lion," and it has always been known that the truest form of courage is most frequently associated with gentleness and sympathy. As we have said, responsibility always exists. The moment we tender our services to a patient we are under contract to give him our best skill and knowledge, legally and morally, and our responsibility cannot for a moment be relaxed as long as our connection with the case lasts. We honestly believe that all members of our profession feel this responsibility, and act, in consequence, each according to his gifts. So-called callousness is often but the ability

in a man to control his feelings, to keep cool in the midst of excitement, and to allow his mind to work to the best advantage in favor of his patient.

As we have said, responsibility always exists. The moment our services are tendered to a patient we are under contract to give him our best skill and knowledge, both from the standpoint of morality and the law, and their application may not be relaxed for a moment as long as our connection with the case continues. Herein lies our responsibility, and it should leave our minds at rest as long as we are conscious of having assumed it in the right spirit.—*Internat. Jour. of Surg.*

INTRA-PERITONEAL RUPTURE OF THE BLADDER.—Mr. Walsham (*Brit. Med. Journal*) has reported a case of rupture of the bladder in a man aged forty-two, treated by laparotomy and suture, with prompt recovery. The diagnosis was established by inflating the bladder with a few cubic ounces of air forced in by two or three compressions of the rubber ball of an ether-freezing microtome. As the introduction of gas into the abdominal cavity, even in small quantity, is attended by profound disturbance, the author advises that this test should not be employed until the patient is on the operating table, so that should collapse threaten the abdomen can be at once opened and the air allowed to escape. In the after treatment a catheter should not be left in the bladder because it is unnecessary, and because of the risk of cystitis and septic infection. Of the 28 published cases of intra-peritoneal rupture of the bladder treated by suture, 11 recovered and 17 died. In the cases that recovered, in only 1 was peritonitis present at the time of operation, while in 8 or 9 of those that died peritonitis had already set in. In 4 out of the 28 cases the bladder was found to leak at the post-mortem, and the author therefore strongly urges the importance of testing the competency of the bladder by injecting milk or other bland and easily detectable fluid.—*Internat. Jour. of Surg.*

TOUGH AND INTRACTABLE STRICTURES OF THE URETHRA.—Prof. Roswell Park (*Med. News*) describes a new expedient for dealing with this class of cases. He says: "I have recently had to deal with a long-recurring, exceedingly dense, and tough cicatricial contraction of the urethra, through which, after tedious effort, I succeeded in passing a filiform whalebone-bougie. Over this, as a guide, I endeavored to pass a variety of urethral instruments, but could coax nothing in the shape of a metallic instrument through the dense tissue. I then opened the deep urethra by perineal section, having the fine whalebone as a guide. Over the slightly bulbous extremity of this filiform bougie I tied, tightly, a piece of fine braided silk. Withdrawing this through the

urethra in a forward direction, I pulled through with it the silk, which I then proceeded to utilize as a fine chain-saw in the same way that Abbe has succeeded in attacking œsophageal strictures. With the fingers of one hand in the deep perineal opening, and with the other hand free outside, I could pull the silk backward and forward. Using it in this way as a very fine chain-saw, I succeeded in enlarging the canal. After repeated efforts the stricture was divided to a degree permitting a threading of the silk through the eye of a tunnelled urethrotome, which was at last passed down through the urethra, its blades separated, and the obstruction divided without further difficulty."—*Internat. Jour. Surg.*

SURGICAL TUBERCULOSIS.—Dr. N. Senn, in the *Southern Practitioner* for January, publishes a clinical lecture from which the following will prove interesting: "The present tendency is to adopt more and more conservative measures in place of mutilating operations. It is no longer the man who can amputate a limb successfully and obtain satisfactory results that is entitled to distinction, but it is the humble worker in the science of surgery that interprets these pathological conditions correctly and subjects his patients to non-mutilating, conservative measures. It is the truth of this statement I wish to impress upon your minds strongly in connection with the treatment of tuberculosis of joints, and in this case I have shown you that this ominous fistula in all probability has decided the fate of the limb, if not that of the patient. The injection of ten per cent. iodoform glycerine emulsion every week or two in the treatment of uncomplicated joint tuberculosis yields the most happy results, because in such cases the iodoform exercises a specific anti-bacillary effect and at the same time constitutes what is invaluable in the treatment of such affections, a powerful tissue stimulant. Valuable as it is in cases of uncomplicated tubercular abscesses, such as I described to you in my preliminary remarks, it is useless in mixed infection with pus microbes. The uselessness of iodoform in the treatment and prevention of suppuration was demonstrated by the experiments made in 1800 by Rosving. He showed that pus microbes will grow luxuriantly upon nutrient media strongly impregnated with iodoform, and thus practically demonstrated that iodoform is not destructive to pus microbes, and we find his experiments and researches sadly corroborated by clinical experience in the treatment of tubercular joints, the seat of a secondary pyogenic infection."—*Am. Med. Review.*

RADICAL CURE OF HERNIA.—At the late meeting of the Medico-Chirurgical Faculty of Maryland, Dr. Walter B. Platt, of Baltimore, exhibited a boy, seven years old, upon whom he had operated

for the radical cure of inguinal hernia by what appears to be an original procedure. He opened the inguinal canal in the usual way, reduced the hernia, and then took a small piece of sponge, washed it thoroughly, and by boiling made it thoroughly aseptic and put it in the conjoined ring and sewed it in there with the idea of keeping the hernia in place and having the sponge organized. It is not possible to speak of a cure, as it has been done only three months; but so far the boy can run about and play, the hernia stays up, and the sponge has caused no disturbance, so it must be organized by this time. Macewen says that only about forty per cent. of the cases operated on in the usual way are cured after two and a half years. If his case turns out well he shall treat all other children with the same kind of hernia in the same way.—*Maryland Med. Jour.*

IRRIGATION OF PUS JOINTS.—Dr. Finney comments upon the uniformly unsatisfactory results of the old method of treating pyarthrosis, which was by aspiration or incision, followed always by the insertion of drainage tubes. The final result of that operation was, in the most favorable cases, a stiff knee. In many there was a resection of the joint later, and in a large proportion of cases an amputation of the leg. In a case treated at Johns Hopkins Hospital, a different plan was followed, at the suggestion of Dr. Halstead, with much success. The operation was after applying a tourniquet to the thigh, to make a long incision into the joint on either side of the patella, through which the joint was irrigated with several gallons of 1 to 1,000 bi-chloride solution. Then the tourniquet was removed, the wounds covered with protective, and treated in the ordinary way. There is little to be seen now except two parallel granulating wounds. The patient has been recently anesthetized and the fibrous adhesions which had formed broken up.—*Jour. Am. Med. Assoc.*

THE curette in the course of acute gonorrhœa is one of the surest means of causing extension to the tubes and ovaries. The mucosa, acting as a barrier against microbic infection, having been destroyed, entrance of specific pus from the vagina sets up uterine gonorrhœa of aggravated type, and the parametrium is liable to invasion through open and damaged lymphatics. Enforce rest. Leave the uterine cavity alone. Swab vagina and cervix with a one-per-cent. silver solution once or twice per week. Inject a 1 to 1,000 sublimate solution twice daily.—Auvard, *Arch. de Toccol.*

DR. WELCH reports a case of ataxic speech, *Med. News*, following the exhibition of large doses trional. Recovery took place on the withdrawal of the drug.

SURGICAL ITEMS.

I would emphasize that in every case of carcinoma it is necessary not only to extirpate the primary focus and the infected lymphatic glands, but also the communicating lymphatics, together with the surrounding tissues. This should be done thoroughly and systematically.—*Rydygier*.

For fissure of the anus Mr. Cripps advises a soothing ointment of six grains of morphine to the ounce of unguentum petrolii, applied five minutes previous to stool, and an astringent ointment, as sulphate of iron, ten grains to the ounce of ointment, or tannic acid, twenty grains to the ounce after the stool. Another good ointment is ten grains of camphor or fifteen drops of carbolic acid to the ounce.

Splenopexy is yet of too recent date to permit of passing a final judgment upon its value; but it is to be expected that, just as nephropexy has taken the place of nephrectomy in the treatment of floating kidney, splenopexy is destined to replace splenectomy in the treatment of movable spleen. It is obvious that splenopexy must necessarily be less grave in respect of its immediate consequences than splenectomy, while it presents the advantage of preserving an organ, the usefulness of which to the patient is unquestionable.—*Heydenreich*.

When, as in an amputation at or near the ankle joint, a rubber tourniquet is applied to the thigh, care should be taken to use a wide rubber band and not a rubber tube, since the accumulative pressure of the rubber tubing is sometimes great enough to injure the nerve. In high amputations, near the shoulder or hip, this objection does not prevail, since pressure on a nerve is immaterial at that point.—*Wyeth*.

My experience with the diagnosis of ectopic pregnancy before operation very distinctly contradicts the assertion which Tait made some years ago; that this diagnosis can never be made until after the abdominal cavity is opened. I can prove by the records and by my assistants that with scarcely an exception I made the probable diagnosis with sufficient assurance to warrant me in sending out the invitation cards to the operation so printed.—*Mundé*.

POWDER FOR THE TREATMENT OF GENITAL HERPES.—Dr. E. Gaucher:

R.—Powdered alum, . . . }
Powdered starch, . . . } aa 10 grammes.

Mix.—For external use.

The balano-præputial region is dusted over with this powder. Recovery is usually promptly obtained.

I know of no operation which more requires the qualities and qualifications of a good surgeon than

does thyroidectomy. No oozing or little pools of blood should obscure the tissues. It is absolutely essential to see and feel all the structures encountered, so that hæmostasis must be absolute, to insure the safe performance of the operation. When half or two-thirds of a goitre is removed a certain amount of atrophy takes place in the portion left. This was noticed in at least four of my cases, one of them being still in the Charity Hospital.—*A. H. Ferguson*.

Syphilis seems to have a very blighting influence upon the vitality of skin grafts, and because of this fact skin grafting cannot with confidence be recommended in the ulcerations produced by that disease. The possibility of inoculating persons with syphilis should be borne in mind when the grafts are taken from one person and engrafted upon another. Instances are on record where syphilis has been produced in this way, and therefore it is wise, whenever possible, to take the grafts from some part of the patient's own body.—*J. C. Oliver*.

The treatment for acute urethritis employed by Dr. R. Turner at the Seaman's Dispensary, Liverpool, consists of an alvine pill, 1 gr. at night, and the application of dilute nitrate of mercury ointment containing morphine 1 gr. to the ounce. A lucifer match with a fine layer of cotton wool twisted around it is smeared with the ointment and passed into the urethra three or four times a day. This causes no smarting, and in about eight or ten days the discharge has almost disappeared. At the same time an alkaline mixture containing hyoscyamus is given. Should the case not be seen till later, say about three weeks, injections of liquor plumbi subacetatis ʒ j to ʒ vj. of chloroform-water do very well, along with small doses of an emulsion of copaiba balsam given by the mouth—

TREATMENT OF HÆMORRHOIDS.—Professor Roux speaks highly of the following treatment of piles: Place patient in the lithotomy position, and introduce the two thumbs into the rectum. Then, making semi-circular movements, gradually separate them, until, by dilatation of the rectum, they come in contact with the ischium. When the piles are brought plainly into view, take a hypodermic syringe, filled with a fifty to eighty per cent. solution of carbolyzed glycerine, and inject two drops of the solution into each pile, holding the base of the pile, between the thumb and index finger, while the needle is entered near the anus and pushed to the base of the pile, not going directly through the mucous membrane. This is a precaution against bleeding, which is however, very slight. Professor Roux thinks the good results are due rather to the dilatation than to the injections.—*L'Union Médicale*.

MEDICINE

IN CHARGE OF

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PRACTICAL AIDS IN THE DIAGNOSIS
OF PERICARDIAL EFFUSION, IN CON-
NECTION WITH THE QUESTION AS
TO SURGICAL TREATMENT.

BY WILLIAM EWART, M.D. LONDON, ENG.

Some years ago, when honoured by a junior colleague with a request to examine one of his patients as to the existence of pericardial effusion or of a cardiac dilatation, I happened to diagnose the case correctly ; but on how insecure a ground my opinion was based I have since then realized. I can also bring to mind a painful instance—probably not unparalleled in the experience of others—in which I failed to perceive during the patient's life, though not from neglect of examination, the presence of a large effusion which should have been aspirated. This early mistake led me to work out gradually a more complete method of physical examination, which I trust others may find of as much advantage as it has been to myself.

The elements of the method are (1) accurate percussion and palpation, (2) careful auscultation, and (3) observation of the pulse. All the signs to be enumerated should be understood to apply to effusions sufficiently large to raise the question as to surgical interference. We cannot attempt to-day the more delicate diagnosis of slight and early effusion. Lastly, as our time is short, and our object a practical one, I must reserve all theoretical considerations, and put before you the facts with as little comment as possible.

I. PERCUSSION AND PALPATION.

Pericardial distension taking place usually in all directions, vertically as well as transversely, the first requisite is a competent knowledge of the normal levels and lateral extensions of the præcordial dulness, a subject to which I have formerly given some attention.

(a) *The Normal Boundaries of the Total Cardiac Dulness and its Angles.*—The lower level of the healthy dulness is that of the junction of the xiphoid cartilage with the sternum : in other words the level of the infrasternal notch. It is identical with the "hepatic line" of dulness, or

upper line of the absolute dulness of the liver (above which partial or modified hepatic dulness ranges as far as the "suprahepatic" line, dotted in Fig. 1). At the lower half of the præcordium

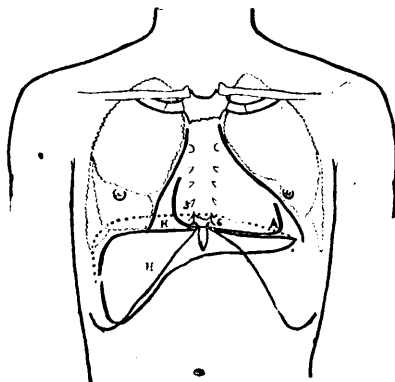


FIG. 1.—Illustrating "Rotch's sign" (dulness in the right 5th space—5 to H) ; also contrasting the angle, (on either side of H) of the dulness as due respectively to effusion and to dilatation. The heart's outline is normal in size and position. The outer lines are those of the dulness in moderate effusions. The "suprahepatic line" (dotted) and the "hepatic line" limit the normal "modified" dulness of the liver ; and H is placed on the absolute dulness.

the lateral boundaries of the anterior projection of the entire heart are situated respectively $1\frac{1}{4}$ or $1\frac{1}{2}$ inch to the right of the sternal margin, on the right side ; and on the left, just inside the nipple line. This interval comprises both the absolute cardiac dulness, which is usually small, and which also has definite normal boundaries and the total cardiac dulness. The normal *right lower angle* : Very careful percussion shows that the right boundary of the total dulness does not drop vertically on to the hepatic line. Its lower end is gently curved, and inclines inwards so as to terminate not far from the infrasternal notch ; this is due in great measure to the convex shape of the right auricle, but it is also due to the resonance which arises from the overlapping lower angle of the right lung. The normal *left lower angle* : This, again, is usually rounded off, although corresponding to the angular projection of the heart's apex. As I have elsewhere pointed out, thanks to its contact with much pulmonary and with much

gastric resonance, the apex invariably becomes resonant also. We do not, therefore, find the normal apex beat within, but immediately outside, the outline of dulness, which is thus blunted or rounded off in a convexity towards the left. The upper level of the retrosternal cardiac dulness does not usually receive much attention. The line joining the lower edges of the third costal cartilages separates the præcordial dulness below from the prævascular dulness above; the latter being narrow and slight, needs care for its recognition.

(b) *The Normal Sternal Resonance.*—Although there is no lung tissue, but only the heart behind the lower half of the sternum, the latter is not dull, but more or less resonant. This is due to a strong conduction of resonance from the upper part of the bone, where this is in contact with the upper lobes of both lungs, and also from the right costal cartilages. Whenever this conducted resonance is lost we conclude that the sternum has ceased to be in contact above with the lungs. In health the absolute dulness of the heart is strictly limited towards the right by the left edge of the sternum, entirely owing to this bony resonance by conduction.

The order in which the following signs are given has not any reference to priority in time :

FIRST SIGN.

Considerable Extension of the Lateral Boundaries of the Total Area of Dulness.—In the diagram (Fig. 2), which shows the total pericardial dulness, the border of the lungs, depicted as they are often found, does not coincide with the lateral boundaries of the distended sac, but overlaps the latter. It is the superficial resonance of their fringes and the

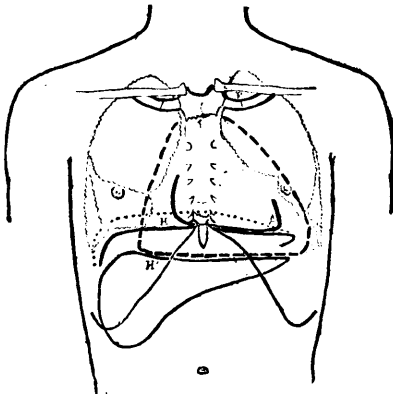


FIG. 2.—Outline of a large effusion, which the pulmonary fringes overlap, and of a total area of dulness. The liver is depressed from its normal level H (infrasternal notch) to the tip of the xiphoid. X shows the position of the finger for the "first rib sign."

puerile vesicular murmur arising from them which are so apt to mislead us at times into rejecting the idea of effusion. A careful percussion will guard

us against this danger, and will enable us to delineate a complete outline of the sac.

SECOND SIGN.

Great Extension of the Absolute Dulness; the Sternum Absolutely Dull.—The same diagram sufficiently illustrates this point also. It is seen that the two upper lobes are widely separated, and removed from all contact with the sternum. It should be noted that any retrosternal accumulation, whether of the solid or of the fluid kind, which will bring this about would likewise completely deprive the sternum of its normal resonance. A much enlarged heart (and particularly that form of hypertrophy and dilatation arising from pericardial adhesions), aneurysms, abscesses, mediastinal growths, etc., may bring about this change, which therefore, taken apart from all others, is not absolutely diagnostic, but is of great importance when taken in conjunction with them.

THIRD SIGN.

The Depression of the Liver.—Any cardiac enlargement, and any considerable pulmonary distension will produce more or less displacement downwards of the hepatic line of absolute dulness, and enable us to feel more or less directly the epigastric pulsation of the heart; but in no other condition, except in pneumothorax and in intrathoracic sarcoma, is the hepatic depression so marked, at least in the middle line, as in large effusions. Instead of being found at the infrasternal notch, the hepatic percussion note begins at the level of the tip of the xiphoid, or even lower. As a result of this depression, the finger applied immediately below or at the side of the xiphoid can be made, by being pushed upwards and backwards, to ride over the upper surface of the liver, which normally is quite out of reach.

In another set of cases where pericardial dulness is much increased, namely, in obesity, the diaphragm is apt to rise instead of falling. If, therefore, any distinction were likely to be needed between the two clinical conditions, this point would be, practically speaking, diagnostic.

FOURTH SIGN.

Dr. Rotch's Sign: Dulness in the Right Fifth Intercartilaginous Space.—Some years ago Dr. Rotch published this valuable suggestion for the early diagnosis of effusion into the pericardium. The diagram (Fig. 1) will explain to you the meaning and the value of this sign. As a result of accumulation of fluid within the right corner of the sac, the usually resonant area in question becomes dull on percussion. Is this absolutely diagnostic? In other words, are there other possible sources for a dulness in this situation? In the *Glasgow Medical Journal* for April, 1894, Dr. George S. Middleton reports a remarkable case of

tricuspid stenosis, with enormous dilatation of the right auricle. The diagram which illustrates the case shows considerable width of dullness at the base of the thorax; the dullness extending 2 inches outside the right, and $2\frac{1}{2}$ inches outside the left, nipple line, and rising to the second rib. This outline being almost identical with that of a large pericardial dullness, the question as to the possible existence of pericardial effusion was considered, but decided in the negative. In connection with the shape of the dullness depicted, especially that of its right lower corner, it is to be regretted that the illustration does not appear to be an actual tracing from the chest, but a diagram only. We are left in doubt whether the sternum was absolutely dull. But as regarded the right fifth intercartilaginous space near the sternum, it must be concluded from the diagram and from the *post-mortem* observations that that space was absolutely dull, owing to the retirement of the lung, just as it would have been dull as the result of effusion. Here, then, is a case in which Rotch's sign in itself could not have supplied the diagnostic verdict. We need something additional, and this need may I think be supplied.

FIFTH SIGN.

The Diagnosis Between Pericardial Effusion and Cardiac Dilatation: The Lower Angle of the Pericardial Dullness projects towards the Right.—Instead of the normal convexity of the right auricular border, which retires downwards and inwards towards the xiphoid, the outline of effusion is that of a bag of fluid spreading out at the base. As shown in the diagram, the lowermost level is also that of the greatest width of dullness from side to side, and the lowermost angle projects outwards. This prominent angular outline cannot belong to uncomplicated dilatation of the right heart, however large a size it may attain, owing to the fixation of the lower part of the right auricle to the orifice of the vena cava near the middle line. From the surgical standpoint the practical importance of this physical sign which seems to be the only one establishing a diagnosis between pericardial effusion and cardiac dilatation lies in the fact that aspiration of a dilated right auricle, mistaken for effusion, has been repeatedly recorded and has occurred more often than it has been published. For a skilled percussor the method presents no difficulties, but it entails a careful percussion of the entire length of the right border of dullness, and a faithful mapping out of its outline. Tracings of this can be taken directly from the chest, and these may prove to be of much value in connection with subsequent clinical events.

SIXTH SIGN.

The Left Lower Angle of Dullness. The Relation of the Apex Beat to this Angle.—Here again

the pyramidal shape of the dullness gives towards the left, instead of the somewhat rounded-off outline which is normal, a prominent angle. This alone is very significant, but it is not an absolute guide, since any cause preventing the natural overlapping of the lung over the heart may give the same result. On the other hand, a determination of the relation of the heart's apex to the left angle of dullness is of great diagnostic value. In cases of cardiac enlargement or displacement to the left, howsoever brought about, the apex beats at the extreme left limit of the dullness and at its lowest level. This is not the case in pericardial effusion. The apex cannot be felt where there is much effusion; but it will be heard beating at a spot somewhat inside and above the boundaries of dullness. The small arrows in Fig. 3, draw attention to this striking and all-important relation.

Remarks on the Position of the Heart's Apex in Pericardial Effusion.—To the surgeon about to operate an accurate knowledge of the position of the heart and of its apex is of the first importance. Yet it may be doubted whether correct information is often possessed at the time when it is most needed. For this reason I cannot avoid warning you against a remarkable misconception hitherto perpetuated by the textbooks as to the alleged elevation of the apex within the pericardial effusion even as high as the third interspace.

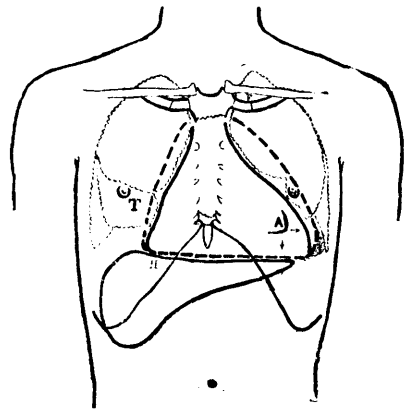


FIG. 3.—Outlines of the total and of the absolute areas of pericardial dullness. A, position of the cardiac apex (fifth space) in the effusion. The dullness is shown by the arrows to extend far beyond and below A. The right auricle (not shown) descends with the diaphragm. T, the inframammary patch of tubular breathing.

That an impulse can usually be felt there is not surprising, since the antero-posterior diameter of the chest at that level (between sternum and spine) is not much greater than that of the heart itself, whilst the left lung no longer intervenes between the latter and the chest wall. The impulse is not, however, that of the apex of the

heart, but rather of its base. Whether the extraordinary mistake arose with Sibson, or was only handed down by him, I know not; still his authority probably had something to do with its long survival. In Fig. 3 the letter A is placed in the usual situation of the healthy heart; and at that spot you will find the apex at any necropsy on a case of uncomplicated pericardial effusion. And you will then note that whilst the heart has preserved its normal situation, the floor and the sides of the pericardium have receded from it.

The impossibility of the apex being raised as alleged to the third interspace by the operation of gravitation or of ordinary mechanics is almost self-evident. The vessel which I show you contains serum, or rather a fluid which my able former clinical clerk, Mr. J. L. Kirk, who is giving me his valuable assistance, has prepared of specific gravity 1.018, which is, according to Professor Haliburton, the usual density of pericardial effusions. If we drop into it a heart, this will sink like lead. Were we to enclose some blood in a thin membranous bag and introduce the bag into the jar, this also would sink to the bottom. The heart, even in diastole, cannot therefore float in serum. Slight mechanical displacement might conceivably be brought about by one circumstance only—the lifting by the distended pericardial sac of the tracheal bifurcation and of the bronchi, and with them of the pulmonary veins and of the heart. Practically this rise is very inconsiderable, and moreover it does not directly influence the ventricle. On the other hand, we must remember that the heart is tethered to the bottom of the pericardium, by the attachment of the inferior vena cava to the foramen quadratum in the central tendon, and that the considerable descent of the diaphragm must depress the level of the right auricle and tend to depress the apex, far from allowing it to rise. I have in some cases detected a lowering of the heart's apex in pericardial effusion, and with it a more median position of the heart, which then tends to hang more vertically from the aortic arch, the latter becoming slightly straightened. This I have depicted diagrammatically in my book on *Cardiac Outlines*.

The Thoracic Signs.—It is impossible to attempt a complete account of all the physical signs; but before dismissing the subject of anterior percussion and palpation, reference may be made to the great resonance of the upper part of the chest, where the lung (as happens also in pleuritic effusion) is partly retracted, and to the extreme activity of upper costal respiration, making up for the loss of diaphragmatic breathing. The mechanical results of this upper costal hyperpnoea are easily foretold; they imply fulness of the upper portion of the chest, which, however, is not symmetrical, as we shall presently note.

Among the thoracic signs there are two claim-

ing our attention: (1) the bulging of the left chest; (2) the altered relation between the left clavicle and the first rib. The bulging of the left chest is analogous to that observed in cardiac enlargement, only much greater. The left costochondral arch is raised, and much restricted in its movements, and the fourth to sixth cartilages are more spaced than usual. The width of the fourth space is apt to be markedly increased, and the same is true of some of the upper spaces, partly in connection with the thoracic changes to be described.

SEVENTH SIGN.

The First Rib Sign.—In all cases of considerable pericardial effusion which I have examined for this sign, it was possible to feel with the finger the upper edge of the first rib as far as its sternal attachment (see F in Figs. 2 and 3). This points to a raising of the clavicle, not only in its outer but also in its inner portion; and to a relaxation of the ligament between it and the first rib. In the absence of pericardial effusion I have rarely seen this sign, except in some cases of considerable cardiac enlargement. I regard it as specially connected with the immobility and with the elevation of the lower ribs, coupled with the great activity of the superior respiratory region of the chest. The left clavicle is apparently lifted to a higher level than it is possible for the first rib to reach.

The raising of the first rib is not of the same order as that witnessed in emphysema. In the latter its elevation is permanent; clavicle and rib move up together and remain lifted; here, on the contrary, the first rib contributes in its limited range to expiratory as well as to inspiratory movement. Moreover, the spinal mechanism is not the same in the two affections. There is here no rounding of the shoulders. On looking at the chest the general impression is rather that it is bowed out towards the left, the spine being probably bowed likewise by the increased internal pressure, and as a result of the attitude assumed for the relief of respiration. This sign has the advantage of being easily studied without disturbing the patient, and constitutes a definite and useful addition to our clinical evidence of pericardial effusion.

Signs Derived by Percussion in the Back; the Normal Dorsal Percussion.—Although little attention has been given to this subject, it is in the back that the crucial signs are to be found upon which for some time past I have most relied in the diagnosis of pericardial effusion, and in particular that dulness which I venture for convenience to term the posterior pericardial patch of dulness. Here again, as in front, familiarity with the normal percussion is requisite. As I cannot on this occasion enter into much detail, let me

simply give you the assurance that the traditional statement that the lung extends posteriorly down to the tenth rib is a traditional error; the lung extends in health a great deal lower than this, and its resonance would be found by any of you on percussion to reach the upper border of the twelfth rib. This knowledge will enable you to appreciate the value of the following remarks.

EIGHTH SIGN.

The Posterior Pericardial Patch of Dulness.—

Whenever fluid is effused into the pericardium the normal resonance is modified at the left posterior base in a most definite way. A patch of marked dulness (shown in Fig. 4) is found at the left inner base, extending from the spine for varying distances outwards, usually not quite so far as the scapular (angle) line, and ceasing abruptly with a vertical outer boundary. Above, its extension is also variable, according to the size of the effusion; commonly it does not extend higher than the level of the ninth or tenth rib, and here again its horizontal boundary is abrupt. Its shape then is that of a square, and it is quite unlike that of any dulness arising from pleuritic effusion. You will not experience any difficulty in identifying the patch in question. Rather greater care in percussion is needed, however, to follow the dulness as it extends to the corresponding vertebræ, and for a short distance also to the right of them. For some time I overlooked this extension, which, owing to the general resonance of the right base, is one of partial dulness only. When, however, the effusion is considerable, the extension of the patch in the right chest may become almost absolutely dull.

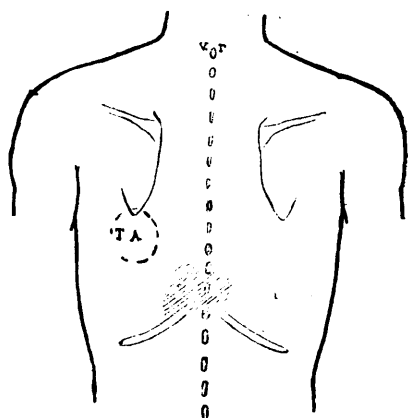


Fig. 4.—The “posterior pericardial patch of dulness” (shaded); and the “posterior pericardial patch of tubular breathing and ægophony.”

I wish time permitted me to discuss with you the significance and the probable mechanism of production of this singular and most helpful sign. It is best I should confine myself on this occasion

to practical points. The value of this sign is, that, unlike many others, it is very sharply defined, and does not fit any other diagnosis. When, in a doubtful case, all the signs observed in front support the diagnosis of effusion, and this sign is also found, we have then in hand complete and crucial evidence of the existence of fluid; whilst when, as sometimes occurs, previous adhesion of the anterior surface of the heart to the chest wall renders diagnosis extremely difficult, and help is invaluable, and its place, so far as I am aware, cannot be supplied by any other available diagnostic method.

Signs derived by Auscultation in Front and Behind.—To the auscultatory signs we can only devote very cursory remarks. Anteriorly the first feature is the hypernœa, and the puerile breathing heard over the upper lobes; and, in severe or protracted cases, the catarrh set up within them, which tends to produce their further inflation, and to attenuate over a greater surface the dulness due to the distended sac.

NINTH SIGN.

Tubular Breathing Below the Right Mamma.—

Although not constant, this sign, which does not appear to have been noticed, should be looked for in severe cases. At the anterior base (see T in Fig. 3), usually in the nipple line, and a little above the hepatic line, distinct tubular breathing is audible, which is sometimes restricted to expiration. Its localization is due, I venture to think, to active respiratory draught kept up by the movements of the upper lobe at the origin of the bronchus for the middle lobe, coupled with the compression of the latter in the situation named, laterally by the base of the pyramidal collection of fluid, and above by the freely expanded upper lobe, often also by a superadded pleural effusion.

It is at the back that the most characteristic signs are to be heard. On auscultating the dull patch to the left of the spine respiratory sounds are found to be absent, and the voice sounds feeble.

TENTH SIGN.

The Posterior Pericardial Patch of Tubular Breathing and Ægophony.—

Immediately below or slightly to the left of the tip of the left scapula a patch about 2 inches in diameter presents well-marked tubular breathing and ægophony (sec. T, Æ in Fig. 4.) This sign, although not so important as that of the patch of dulness, is very commonly, if not always found, in cases of considerable effusion, and gives valuable confirmation to other signs. It has been described by other observers. The mechanism of its production is analogous to that suggested above, and is doubtless connected with pressure on the bronchi descending to that district, and with partial collapse of the pneumonary tissues. It also occurs in pleural effusions.

ELEVENTH SIGN.

The Secondary Pleural Effusions.—Pleuritic effusion is among the most common complications of severe pericardial effusion, and is probably to be regarded as induced mechanically by pressure. If it should be limited to the right side, an opportunity would be given of contrasting the outline and situation of the pericardial patch of dullness with those of the dullness peculiar to pleural effusions. Its occurrence belongs to the later rather than the earlier stages, and therefore its diagnostic value is practically less.

The Pulse in Pericardial Effusion.—You are all familiar with the classical description of the *Pulsus cum inspiratione intermittens*. This is an important sign. I have occasionally observed it in pyopericardium; but it is characteristic of mediastinal rather than of pericardial disease, and it cannot be regarded as diagnostic of the latter.

TWELFTH SIGN.

The Large and Slapping Pulse of Pericardial Effusion.—I have frequently observed in cases of pericardial effusion an opposite condition of the pulse. Attention has not been pointedly directed to it; but, strange to say, it is incidentally mentioned in the light of a tactile hallucination in Marey's book on *La Circulation du Sang*, where a sphygmogram is given to show that the pulse is really small. Marey instances this as an example of the "illusions of touch." I cannot share in his view of the facts. The sphygmograph seems to me to be at fault, not the finger. The peculiarity of the pulse is its great size and velocity of impact, and the sudden collapse of the wave. In fact, it is Corrigan's pulse, almost of a typical kind, though never so extreme as in well-marked aortic regurgitation. Its occurrence under the circumstances of effusion may throw an interesting side-light on the mechanism of its production in aortic valvular disease. Time, however, forbids our discussing the suggestions which might be offered towards an explanation of its mode of origin in the affection we are studying.

CONCLUDING REMARKS.

In this important sketch I have not dwelt upon various familiar but valuable signs, such as friction sounds and fremitus, nor on the symptoms of pain, alteration of respiration, position in bed, etc. My endeavor has been to add to your supply of available signs some which are novel and others which are not commonly described, such as might in conjunction with the old ones facilitate your diagnosis of any case. A full presentation of the clinical subjects of pericardial effusion would be a much longer task than we could deal with at this short meeting.

Turning now to the practical application of the method, I believe that the confidence of the sur-

geon in operating upon any given case will be increased by a knowledge that all the typical signs pointing to a normal effusion have been obtained.

The most difficult and anxious part of our subject is, however, one to which I have not yet alluded. In practice we must always be prepared to find a wide difference between the classical account of a disease and our patient's individual case. Pericarditis is no exception; and the irregular case presents special importance for the surgeon. The fact is that effusion may supervene, either after a previous attack which has left the heart adherent to some part of the sac, or after an early fibrinous stage more than usually agglutinative, leading to soft adhesions—perhaps likewise limited to one side—and to a partial filling of the sac with heavy gelatinous masses of fibrin. To such cases the ordinary rules as to the position of the heart do not apply, and it becomes our duty to work out for ourselves the special conditions of each case. This is often a very difficult task; still we must not despair of its accomplishment, but on the contrary, regard it as our duty to spare no trouble till it is attained. At any rate, the surgeon whom we may call in to operate will expect us to satisfy him as to the position of the cardiac apex, and to give definite reasons for our view as to the relative position of the heart and of the bulk of the fluid.

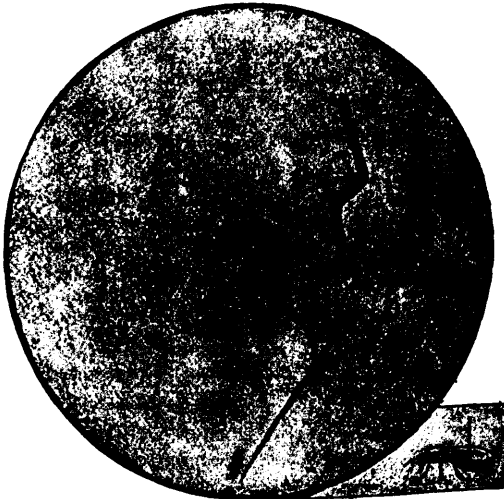
In dealing with difficult cases of this kind we shall appreciate the value of the systematic study which we may have devoted to the typical normal cases, as supplying a definite starting point for our investigation, and a standard with which we may gauge the extent of the irregularity peculiar to any given case. Bearing in mind the relative safety of the operation for using the pleura, and even the pericardium, by incision, it behoves us to endeavor by every means within our reach to render equally safe as regards the heart, and as satisfactory as possible for the efficient relief of the effusion, the apparently more simple but decidedly more uncertain operation of aspiration.—*Brit. Med. Jour.*

MOSQUITOES AND MALARIA.

The mosquito, if we are to credit the results of recent researches, has more to do with malaria than any one has hitherto imagined. In many cases it seems to be the means by which the malaria parasite escapes from the body of one victim and attains its full development preparatory to attacking that of another. We quote from *The Lancet* (London, March 21) portions of the second Goulstonian lecture, delivered before the Royal College of Physicians on this interesting subject, by Dr. Patrick Manson. He begins by stating

that of two forms of the malaria parasite, the one found within the human body provides for its propagation only outside the body, while the form found outside is able to propagate only inside. How then, he asks, does the parasite escape from the blood to the outer world, where alone it is able to develop into a form suitable for attacking another victim? It seems likely that this is accomplished by the blood-sucking insects, notably by the mosquito. It is certain that the mosquito is infested by the parasite, as shown in the accompanying picture. After detailing these facts, Dr. Manson continues as follows:

"I think I have advanced many cogent reasons for believing that the plasmodium malarie in leaving man, and as a normal step in its life history, becomes parasitic in the mosquito, and that in this insect it enters some cell—as any gregarine or coccidium would do—and probably develops into its reproductive sporulating form just as it does in the blood-corpuscles of man. What then? How can its spores get out of the mosquito so as to



SECTION OF A FILARIA IN THE STOMACH OF A MOSQUITO.

The darker object is the filaria; it has just escaped from its sheath, the more lightly shaded object below.

increase and multiply and preserve its species from extinction when in the course of nature the mosquito dies? How, too, does it spread over the land, and how does it get back to man again?

"Before attempting to answer these questions, I must first describe very briefly a passage in the life of the mosquito. The female mosquito, after she has filled herself with blood—the male insect is not a blood-sucker—seeks out some dark and sheltered spot near stagnant water. At the end of about six days she quits her shelter, and, alighting on the surface of the water, deposits her eggs thereon. She then dies, and as a rule falls into the water beside her eggs. The eggs float about

for a time, and then in due course each gives birth to a tiny swimming larva. These larvæ, in virtue of a voracious appetite, grow apace, casting their skins several times to admit of growth. Later they pass into the nymph stage, during which, after a time, they float on the surface of the water. Finally, the shell of the nymph cracks along its dorsal surface and a young mosquito emerges. Standing as on a raft on the empty pelt the young mosquito floats on the surface of the water while its wings are drying and acquiring rigidity. When this is complete it flies away. The young mosquito larvæ, to satisfy their prodigious appetites, devour everything eatable they come across; and one of the first things they eat if they get the chance, is the dead body of their own parent, now soft and sodden from decomposition and long immersion. They even devour their own cast-off skins. In examining mosquito larvæ one often comes across specimens whose alimentary canals are stuffed with the scales, fragments of limbs and other remains of the parental insect.

"As we have seen that the mosquito larva devours its own and its neighbor's exuvie, we can readily understand how, once gregarines have been introduced into a pool of water, the larval mosquitoes in that particular pool become infected by the parasite. But as the mature mosquito when she quits her nymph husk also contains numerous gregarines, we can also understand how she, too, carries the infection with her, scattering it about the country in her fæces or conveying it to another pool where she may lay her eggs and afterward die. Her body is then devoured by her progeny or by any other mosquito larvæ that already chance to be in the pool. Along with her body, of course, the larvæ swallow any gregarine germs it may contain if they have not already been picked up by the larvæ when feeding on the mud at the bottom of the pool. Does not this little story of the gregarine indicate the way, or a way, in which that other mosquito sporozoon—the plasmodium malarie—multiplies? Does it not indicate how this parasite, in which man is so much interested, passes from mosquito to larva, from larva to mosquito, in never-ending series? Does it not indicate how the plasmodium disease of mosquitoes spreads from pool to pool and is scattered broadcast about the country, and does it not indicate how it may get back to man again?

"We can readily understand how the mosquito-bred plasmodium may be swallowed by man in water as so many disease germs are, and we can readily understand how it may be inhaled in dust. Mosquito-haunted pools dry up. The plasmodia in the larvæ, and those that have been scattered about in the water, finding themselves stranded by the drought, and so placed in a condition unfavorable for development, pass into a resting stage, just as they do when by quinine or other means

man is rendered temporarily unsuited for their active life. . . . The dried sediment of the pool, blown about by the winds and currents of air, is inhaled by man, and so the plasmodium may find its way back again to the host from whom its ancestors had, perhaps, started generations back. I would conjecture that on entering man and on entering the larval mosquito it develops into a flagellated spore similar to the flagellated spore into which it develops in the mosquito's stomach. In this it should be enabled to penetrate the mucous surfaces and get into the human blood-cell. Many mosquitoes die without getting to water; all male mosquitoes die without seeking water. They may die far from water, blown away, as we know mosquitoes are, by high winds. The bodies of such mosquitoes fall in time on soil and decompose. The parasites they contained pass into the resting stage, and in this form they also may be carried into the air by currents, or be blown about as dust, or be shaken out by man when he disturbs the soil. In this way the plasmodium may find a route back to man again. In this way, too, we may explain the occurrence of those cases of malaria which apparently, though not really, are unconnected with swamp or stagnant water. Such is my view of the life history of the malaria parasite, and the rôle of the mosquito with regard to it, and of the process by which man becomes infected."

This interesting discovery may bring a certain amount of consolation to the poor mortal racked by chills and fever, when he realizes that his arch enemy, the mosquito, is suffering even as he is; and, it is certainly encouraging to know that in fighting the mosquito we are also fighting the propagator and breeding-place of malaria. Systematic war on mosquitoes by killing their larvæ—for instance by spraying stagnant pools and marshes with crude petroleum—is now seen to be more necessary than ever, and when it has been persistently enough urged by scientific men, it will doubtless be carried on on a large scale.—*Literary Digest.*

WHEN you meet an employé of Parke, Davis & Co., whether on the road or in the house, you meet an enthusiast. He does love to expatiate on the wonderful growth of "his" firm—the number of its laboratories, branch houses, agencies, and representatives; its twenty-nine distinct lines of pharmaceutical preparations and its six thousand different products. It reminds you of John Bright waxing eloquent in the House of Commons over his favorite theme—the prosperity of the United States.

But there is good ground for his enthusiasm and for marvel at the amazing success of this firm. Recently they have opened two new branch

houses to satisfy the rapidly growing demand for their preparations—one at New Orleans and another at Baltimore.

The price list which Parke, Davis & Co. are now distributing, and which suggested these reflections, is an admirable catalogue in its completeness, convenience of arrangement, and wealth of miscellaneous information. By all means write the house for a copy.

And remember, too, that the products of this firm are so many weapons for your assistance in the perpetual, harrassing warfare with disease—weapons upon which you may rely through thick and thin, in emergencies as well as in routine practice. Their label on a bottle or box means that the contents have been prepared with the utmost skill, and with scrupulous deference to purity and activity.

THE CUTANEOUS IRRITATION OF MEASLES, ETC.

—Balsam of Peru is a useful addition to many ointments, both on account of its pleasant odor and because it is in itself a valuable non-irritating antiseptic. When added to vaseline it is much more readily mixed if a few drops of alcohol or castor oil are added. The following may be recommended to allay the cutaneous irritation of measles, chicken-pox, etc ;

R—Lanolini puris, ʒj.
 Vaselini, ʒ iij.
 Ol. ricini, ℥ iij.
 Aq. dest., ʒ v.

Ft. ung.—Sig. Apply as required.

Preparations of vaseline or parolene can have a pleasant odor given to them by the addition of a few drops of oil of wintergreen.—*Practitioner.*

ELIXIR SALICYLIC COMP.—Wm. R. Warner & Co.'s Elixir Salicylic Comp. is at the present time, no doubt the foremost remedy for rheumatism, gout, lumbago and kindred diseases. In acute inflammatory rheumatism, two tablespoonsful every few hours, diminished to one tablespoonful every three hours produces desired effects. It is a pleasant and permanent remedy, and is put up in 12 oz. square blue bottles by Wm. R. Warner & Co. It is advisable to purchase Elixir Salicylic Comp. (Wm. R. Warner & Co.) in original packages to avoid substitution of inferior imitations.

SYPHILITIC GUMMATA OF THE HEART.—During a recent meeting of the Montreal Medico-Chirurgical Society, *Montreal Med. Jour.*, Vol. xxiv., p. 474, Dr. Finley presented the report of a case of syphilitic gummata of the heart and liver, and exhibited the pathological specimens showing the characteristic lesions.

OBSTETRICS AND GYNÆCOLOGY

IN CHARGE OF

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NEW POSTURAL METHOD OF TREATING PROLAPSUS OF THE UMBILICAL CORD.

BY A. BROTHERS, B.S., M.D., NEW YORK.

Prolapsus of the funis is a serious complication of labor, chiefly because of the increased dangers to the child. Hecker placed the infantile mortality at 37.6 per cent., Scanzoni and Churchill at 53 per cent., and Charpentier at 79 per cent. The writer studied the causes of death in 167 stillbirths from the records of the New York Bureau of Vital Statistics, and found that 28 per cent. were attributed to compression of the umbilical cord. We are justified in concluding, from the very lowest estimate, that in one-quarter of the cases in which this complication exists the child is lost.

The nature of the presentation, the shape of the pelvis, and the duration of the labor are modifying prognostic circumstances. The early discovery of the prolapsed cord before the rupture of the membranes offers a far better prognosis for the child than the case in which a considerable portion of the cord is found prolapsed after the waters have escaped. The greatest danger to the child is offered by the association of prolapsus with vertex presentation. According to Edgelman's studies only 36 per cent. of such children survive. Presentations by the shoulder or breech offer a much better prognosis—50 per cent. living children. In primiparæ the infantile mortality is far greater than in multiparæ.

The postural treatment for this unfortunate complication was first suggested by Thomas. The woman being placed in the genupectoral position, the body of the uterus tends to sink lower than the cervix, and the replaced cord, owing to the same force of gravity, tends to slip down to the fundus and out of harm's way. The position, however, is an arduous one for a woman in labor, particularly if it is to be kept up for any length of time.

Over a year ago, while preparing the chapter on prolapse of the cord for the William F. Jenks

Prize Essay, it occurred to me that the same result could be obtained in a far simpler manner and with less discomfort to the patient and attendant by raising the pelvis to a sufficient height with the woman on her back. At that time I wrote: "Theoretically the Trendelenburg position ought to be followed by the same result."

Since then two opportunities presented themselves for testing the efficacy of the method. As both children were saved in spite of the worst possible surroundings and absence of nearly all conveniences, I do not apologize for giving the histories. I merely trust that the method may be given a fair trial by those having larger fields for observation.

CASE I.—Mrs. R., æt. 33, mother of six children. Previous confinements usually easy. Present labor has lasted several hours under the care of a midwife, who has made the diagnosis of cross-birth. On my arrival in the dingy basement I found a large, flabby woman—probably weighing two hundred and fifty pounds—in labor on a cot-bed. On external palpation the fetal head was readily felt to the right and the breech to the left. The fetal heart sounds were rapid, but audible to the naked ear. On internal examination the os was found to be fully dilated and the membranes protruding but unruptured. The examining fingers failed to reach any presenting parts. An external version was readily effected by placing each hand at the opposite pole of the fetus and rotating the child so as to get a breech presentation. Vaginal examination now revealed the membranes still unruptured, left foot presenting anteriorly, and, to the right, about six inches of pulsating umbilical cord. I now sent for Dr. M. Cisin, who gave chloroform. An ordinary cane chair was placed upside down at the foot of the bed and covered with a pillow and sheet. With considerable difficulty the very heavy woman was dragged up the incline on her back, so that the pelvis was several feet higher than her head. I now introduced my entire hand into the vagina, pushed the cord very easily into the uterine cavity, ruptured the membranes, and placed a new sponge against the late seat of the prolapsed cord. I next seized the pre-

senting foot and delivered it with a good portion of the breech. After some difficulty the second foot was brought down. As the child was presenting with its abdomen anteriorly—a threatening position for the child—I seized both feet and rotated the body of the child on its long axis, so as to get the dorsum anteriorly. The chair was now removed and the patient dropped to the level of the bed, so as to facilitate further manipulations. The shoulders and arms gave rise to considerable difficulty in their delivery, and the right humerus was fractured in the forcible efforts used. The head—using the Prague method—was readily extracted. After being born the child was found to be cyanotic and in a condition of suspended animation, although the pulsations of the cord were quite strong. Muscle tonus being distinctly present, the cord was quickly cut, allowing a little blood to escape from the fetal end. A little shaking up, after clearing the throat of mucus with the finger, was sufficient to start respiration, and shortly afterward the child began to cry. The mother, in the meantime, was losing considerable blood from a partially detached placenta. Efforts at expression failing, I was obliged to resort to the manual removal of the placenta. After an intrauterine douche and a dose of ergot the mother was turned over to the midwife. The baby was found to weigh ten pounds. A plaster-of-Paris splint was applied to the broken humerus. Mother and child made an uneventful recovery.

There is no doubt in my mind but that the elevation of the pelvis in this case was entirely successful in keeping the prolapsed cord out of harm's way until delivery was completed, and was chiefly instrumental in saving the child's life. At least six inches of cord presented in advance of the child's foot. If left to nature the cord would have come down more and more as the child's body advanced. Compression would have taken place to such an extent as to have cost the child its life.

CASE II.—Mrs. F., æt. 28, third confinement. Previous labors fairly easy. The midwife after being in attendance the entire day, went off for an hour. On her return she found the membranes ruptured and a large loop of the umbilical cord in the bed. On my arrival, about an hour later, I found about twelve inches of prolapsed cord in bed and a complete absence of labor pains; the cord pulsated one hundred and fifty times to the minute. On internal examination the os was found fully dilated; the right hand presented, and above this could be readily felt the face with the chin posterior. A hopeless prognosis as to the child was given. Immediate action was indicated in the interests of the child, so that anæsthetics and assistants were dispensed with. The foot-piece of the bed being about eighteen inches above the place of the bed proper, an incline was quickly made with a washboard and an ordinary piece of

board. These were covered with a pillow and the woman drawn up the incline so that the pelvis was elevated. Seizing the cord with the hand, it was pushed back into the uterine cavity. The presenting hand and face were now pushed to one side and the foot drawn down. The cord again presented to a small extent and remained prolapsed during the remainder of the manipulations. The opposite foot was next delivered, then the shoulders, and finally the head. The entire manipulation did not exceed five minutes in duration. The child was born asphyxiated to the first degree, but the escape of a little blood from the divided fetal end was sufficient to resuscitate it. Both mother and child were doing nicely on the following day.

The second case was not as perfectly successful as the first in the complete reduction of the cord. This I attribute to the long duration of the prolapsus (probably an hour and a-half), the considerable length of the cord prolapsed, the absence of a sponge to keep it in the background, and the absence of anæsthesia and assistants. The fact that the child was notwithstanding born alive is all the more marvellous. I was very much impressed in this case with the ease with which the prolapsed hand and face were turned to one side and the podalic version performed. I cannot help thinking that the elevation of the pelvis proved of great value in bringing about the happy result.

Since the above was written another case was met and treated in a similar manner. The history in brief is as follows: A woman in her second confinement was taken with a slow labor on the morning of November 7th. The midwife who was in attendance all day, noted very little progress. Toward evening, with the os dilated to the size of a fifty cent piece, the membranes ruptured and a loop of the umbilical cord presented in advance of the vertex. An hour and a-half later, when I arrived, I found a highly hysterical woman with feeble labor pains. An examination revealed a somewhat contracted pelvis, a cervix not fully dilated, a vertex presentation with head movable, above the brim, and, in the vagina, about six or eight inches of pulsating umbilical cord. Under chloroform anæsthesia, given by Dr. M. Cisin, the patient was drawn up an improvised incline at the foot of the bed, so that the pelvis was elevated to a height of eighteen inches, and the legs and thighs kept extended (Walcher's method). After a little difficulty the cord was pushed back into the uterine cavity and kept back with the aid of a sponge which had previously been boiled. Forceps was applied, but the movable condition of the head and the somewhat diminished conjugate diameter decided me, in the interests of the child, to relinquish them and resort to version. There was no especial difficulty in pushing up the head and getting down a foot, but during the manœuvres

the cord was again brought down. No effort was now made to replace the cord, my only object being to rapidly complete delivery. The body to the neck was delivered with surprising ease, but the birth of the head required considerable traction (Prague method). The child was born in the second stage of asphyxia and required a half hour's efforts at resuscitation before it could be safely left alone. The case impressed me with the following points: 1. The advantage of the elevated hip position combined with extension of the thighs in increasing somewhat the antero-posterior diameter of the pelvis. 2. The ease with which a prolapsed cord can be replaced and kept back with the aid of a fairly large piece of boiled sponge pushed between the presenting part and the pelvic wall (as suggested years ago by Renshaw). 3. The ease with which the presenting head can be pushed up and a leg brought down. 4. The short time in which a version can be done.

—*Jour. of Obstetrics.*

PAN-HYSTERECTOMY.

Dr. Christopher Martin read a paper on the above subject, in which the whole uterus, including the cervix, is removed by abdominal section. He referred to the surgeons who had performed it in Germany and America, and also to Jessett and Smyly, who were the first to perform it in this country. He had performed it eight times; six times for myoma, once for rupture of the pregnant uterus, and once in a case of occluded cervix with hæmatometra and pyosalpinx. All his cases had recovered. The patient is carefully prepared, and the skin and vagina are cleansed with antiseptic precautions. All instruments, silk ligatures, gauze sponges, and the water to be used are sterilized. An incision long enough to permit of the easy delivery of the tumor is made, and on its extraction sponges are pushed behind to protect the abdominal viscera. The relations of the tumor of the uterus, the ureters, and the bladder, the position of the ovarian and uterine arteries, etc., are ascertained and a double ligature is passed by a Galabin's pedicle needle through the broad ligament at a spot free from veins about the junction of the middle and upper thirds and midway between the uterus and pelvic wall. By pulling one of the two ligatures forcibly inwards and the other outwards a transverse slit is torn about an inch in length, or it can be made by inserting and expanding a pair of forceps inserted into the ligature opening. The ligatures are tied and the intervening tissue cut through. The ovaries and tubes are removed if possible. The middle third of the broad ligament is similarly treated and the bladder detached from the anterior surface of the uterus until the vagina is reached.

This is now opened close to the anterior lip of the cervix. The posterior fornix is next opened. The uterus is now only attached by the lower third of the broad ligaments containing the uterine artery. The tying of these arteries is the most difficult part of the whole operation; usually there is not room for a double ligature, and the ureters must be carefully avoided. After securing the ligature the uterus and its growth are free to be lifted out of the pelvis. Bleeding points should be searched for and secured, the pelvis sponged clear of clot, and all the ligatures cut short except those of the uterine arteries, which are to be drawn into the vagina. Gauze is passed into the vagina and the bladder and other parts allowed to fall over it, but no attempt is made to draw the parts together by sutures. The abdominal wound is closed with silkworm gut sutures. The gauze in the vagina acts as a drain, and is removed on the fifth or sixth day. Dr. Martin does not use the Trendelenburg posture. The uterine ligatures usually separate during the third week and the patient leaves the hospital during the fourth week. There is little shock if the patient is kept warm and the intestines not exposed or handled during the operation. Pan-hysterectomy is a difficult and tedious operation; its dangers consist in chill and shock, slipping of the ligatures with hæmorrhage, damage to bladder or ureters, adhesion of the bowel to the raw surfaces, infection through the vagina, and weakening of the pelvic roof. The last is purely theoretical, and with care other objections are largely obviated. In estimating the value of this operation it requires to be compared with the five other procedures employed for a similar condition: 1. Removal of the uterine appendages is safe in small myomata, but unsatisfactory in large ones. Dr. Martin had removed the appendages in twenty cases for small myomata with one death, and in eight cases for large ones with two deaths. In 90 per cent. of those who recover a cure results, menstruation ceases, and the tumor shrinks. In the other 10 per cent. the patient is not cured, the tumor grows, and the symptoms increase. If a low mortality could be assured, small myomata should be treated by vaginal hysterectomy and large ones by abdominal pan-hysterectomy. 2. Hysterectomy, with extra-peritoneal treatment of the pedicle (clamp cases), has a high mortality— from 15 to 30 per cent. Those who recover pass through the dangers of septicæmia, peritonitis, secondary hæmorrhage from the stump, and ventral hernia afterwards. Sometimes it is impossible to get a safe pedicle if the myoma invades the broad ligament or cervix. Recovery is prolonged. In all these respects pan-hysterectomy is superior to the clamp operation. 3. Hysterectomy with intra-peritoneal treatment of the pedicle is attended with such great risks of hæmorrhage,

suppuration of the stump, peritonitis, and septicaemia that it is even more dangerous than the clamp operation. 4. Vaginal hysterectomy for small myomata compares favorably as regards mortality with removal of the appendages, and of course it is an absolute cure. It is not advisable when the tumor is larger than the foetal head. 5. Enucleation per vaginam is usually a risky operation except for small submucous tumors to which access is easy. It is justifiable in cases of large sloughing submucous myomata, but in other cases pan-hysterectomy seems to be a sounder and safer operation. The advantages of pan-hysterectomy are that it absolutely cures the patient and has a lower mortality than either the clamp operation, enucleation, or the intra-peritoneal method of treating the pedicle. It is attended by remarkably little shock, the convalescence is easy and uneventful. The wound heals by first intention, the patient is up in three weeks, and there is very slight risk of a subsequent ventral hernia.—*The Lancet*.

SYMPHYSIOTOMY AT THE CLINIQUE BAUDELLOCQUE IN 1895.—The January number of the *Annales de Gynécologie* contains a paper by Professor Pinard recording the results of labor in cases of pelvic contraction at the Clinique Baudellocque during the year 1895. In the period in question there were 107 cases of contracted pelvis; 45 of the patients were primiparæ and 62 multiparæ. Among 107 cases there were 5 deaths of mothers. In 3 of the fatal cases delivery was effected by symphysiotomy, in 1 by basiotripsy, and in 1 by Porro's operation. In 77 of the 107 cases delivery occurred spontaneously. In the remaining 30 cases some artificial aid was employed. In 20 of the 30 cases delivery was effected by symphysiotomy. In the other 10 cases delivery was effected as follows: in 1 case by version, in 4 cases by basiotripsy, in 1 case by Porro's operation, in 3 cases by forceps, and there was 1 case in which abortion was induced. Among the 20 cases of symphysiotomy there were 3 deaths of mothers, i.e., a mortality of 15 per cent.—and in 3 of the cases the children died, so that the mortality of the children was also 15 per cent. In the paper referred to Professor Pinard gives also the numbers of his symphysiotomies prior to 1895. His total up to date is 69 operations, with 7 deaths of mothers and 8 deaths of children. The mortality has, therefore, been about 10 per cent. It is particularly interesting to observe that among his cases of contracted pelvis last year Professor Pinard had 5 patients on whom he had operated previously, in 4 by symphysiotomy and in 1 by ischio-pubiotomy. In 3 of these symphysiotomy was necessary a second time, but in 2 delivery occurred spontaneously; in one of

them, however, labor came on naturally at seven months and a half. A formidable objection to symphysiotomy has been that it endangers the solidity of the pelvis. Sufficient time has now passed to enable Professor Pinard to speak definitely on this point, and he says positively that this solidity is not compromised in subsequent pregnancies, or by repeated symphysiotomies. As regards the best mode of extracting the child after symphysiotomy, when the head is high up he prefers version to delivery with the forceps. He protests against the statistics of symphysiotomy being compared, on the one hand, with those of Cæsarean section, and, on the other, with those of the induction of premature labor. For in cases of Cæsarean section he asserts operators too often choose their cases, and perform embryotomy on a living child if they suspect the patient has already been infected; and as regards the induction of labor, the comparison is not fair, because the operation is undertaken in healthy women who are carefully prepared, so that the risks of infection are reduced to the minimum. On the other hand, Professor Pinard performs symphysiotomy in all cases where the child is living—apart from any consideration of the state of the mother or of the surroundings from which she may have just come. He makes a telling criticism in favor of symphysiotomy as compared with the induction of labor in cases of slight pelvic contraction; in the former the operation is undertaken at term, and when the need for interference is imperative and incontrovertible; but what about women delivered spontaneously of healthy, full-term children, for whom, according to theory, induction of labor, with its high infantile mortality, immediate or remote, had been recommended? It is one of the benefits resulting from the introduction of symphysiotomy that the number of such unnecessary inductions of labor has been reduced.—*The Lancet*.

FOR WHOOPING COUGH.—Herbert B Carpenter relieves that bromoform gives better results than any other treatment for this dangerous and distressing disease. After the paroxysms have diminished a change of air, especially sea air, is most beneficial. As bromoform is but slightly soluble in water, it is best to add some alcohol to the solution, giving it in the following manner:

R—Bromoform, gtt. xlviij.
Spts. rectificat., fl. ziv.
Aq. dest., fl. ʒ j.
Syr. toltan, q. s. ad. fl. ʒiij.
M. Sig. ʒj in water every four hours.

The taste is scarcely perceptible. It must be remembered that bromoform is very volatile and decomposes readily. It should therefore be kept in closed bottles and protected from the light.—*Phil. Poly.*

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS

IN CHARGE OF

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SOME COMMON FORMS OF "NEURASTHENIA" AND THEIR TREATMENT.

BY GEORGE HERSCHILL, M.D., LONDON, ENG.

The invention of the term "Neurasthenia" has been usually ascribed to Beard, who wrote the first scientific work upon the subject. But it is really of much older date, as it may be found in the first edition of Dunglison's Medical Dictionary, which was published in 1833.

After much opposition on the part of the profession, even to the extent of a certain amount of discredit being attached to those physicians who had the temerity to study the subject, it has become recognized as a convenient expression for certain groups of symptoms.

These symptoms were supposed to depend upon an obscure condition of nervous exhaustion, but it is now certain that in a great number of instances this is not the case, and it is the object of the present paper to attempt to show the reader how he may differentiate the different clinical groups which may come under his observation.

In the meantime, the term "Neurasthenia" is a very convenient expression to have for use in practice as a provisional diagnosis to be used in the same way as the word "Indigestion," as we thereby do not commit ourselves to any opinion as to the pathology or true nature of the case. In effect, we are stating merely in one word, instead of many, that certain well-defined groups of symptoms are present, and we reserve our exact diagnosis until the case has been further investigated. It may turn out to be a case of true exhaustion of the nervous centres, or, more probably, one of chronic poisoning by gout, alcohol, tobacco or by toxins absorbed from the stomach or intestinal tract.

Neurasthenia may be described as a generalized affection of the whole nervous system, characterized by diminution of nerve energy and increased reaction to external impressions. It may exist alone, or may be associated with other affections. The objective signs are few, but there are a very large number of absolutely characteristic symptoms. The patient, fortunately, does not suffer from all of these, but only from a selection from

the list. These are invariably associated together to form a well-marked group pointing to functional disturbance of one or more organs of the body. It happens, therefore, very often in the practice of medical men, who are not familiar with the subject, that cases of this kind are treated merely as local functional disturbances, instead of as a local expression (*Teilerscheinung*) of a general constitutional condition, and the patient "does not respond to treatment." The extreme importance of a knowledge of the phenomena of neurasthenia to the practitioner will be manifest when I say that as the result of my own personal experience I have found that at least one-third of all the patients who come to consult me, either with "indigestion" or thinking that they have an affection of the heart, are really suffering from neurasthenia, manifesting itself in the gastro-intestinal tract or heart respectively. In making this assertion, I believe that I am much under the mark in my figures. And I have no hesitation in asserting that the success of a man in a high-class practice, will be in direct ratio to his knowledge of neurasthenia, and to his ability to unravel the true pathology of the cases which may come under his observation. He must recognize the fact that although the symptoms in different neurasthenics will all bear a family likeness, and in many instances may be identical, yet the causes, or mechanism of the production of the symptoms may widely differ.

As regards the pathology of neurasthenia, it may now be taken as settled that the symptoms depend not only, as was formerly supposed, upon exhaustion of the nerve cells, but also in many cases upon poisoning of the nervous elements and other tissues of the body by toxic substances circulating in the blood.

Our knowledge of the effect of exhaustion upon the cells of the central nervous system we mainly owe to the valuable researches of C. F. Hodge. He was able to demonstrate that there were always present certain changes in the structure of nerve cells which had been subjected to long continued excitation. His method of investigation was as follows:—The ganglia connected with the leg muscles of a bee which had been flying about all day were compared with the corresponding ones in another which had been confined to the

hive. The nerve centres of a sparrow at seven a.m. were compared with those of one at the corresponding hour in the evening. The sparrow is a very active bird, and works hard for a living, and it is justifiable to presume that it had undergone considerable fatigue between those hours. A ganglion on one of the spinal nerve roots of a cat was electrically stimulated to the point of exhaustion, and then compared with the corresponding unstimulated one on the opposite side. These and many other experiments of a like nature were made. By means of the aid of modern objectives and the improved methods of microscopical technique which the last few years have placed at our disposal, he was able to demonstrate that actual change had taken place in the nerve cells which were fatigued, and not in the untired ones with which they were compared. These changes were invariably present, and consisted practically in loss of cell substance. There was found diminution in the size of the nucleus of the nerve cell, accompanied by irregular outline with loss of reticulate appearance. In the spinal ganglia there was shrinking in the mass of protoplasm with the formation of vacuoles, while in the cells of the cerebrum and cerebellum the pericellular lymph spaces were increased. There was also observed diminution in size in the nuclei of the cell capsules.

But exhaustion of nerve cells, as we have already stated, will not account for all the phenomena of neurasthenia, and there is a good deal of presumptive evidence that they are due to the entrance into, and circulation in, the blood of certain poisons or toxins. And I may say, *en passant*, that it is not improbable that it may be discovered that even the mechanism of the exhaustion of a nerve cell, including the alterations in structure pointed out by Hodge, may be due to the action of a toxine perhaps generated in the nerve itself by its own work. If you take the muscle from a frog and stimulate it electrically until it ceases to respond, you say that you have exhausted it. If you now wash it out through the artery with normal salt solution, it will quickly regain its excitability. This is an experiment familiar to all physiologists. It is evident that you have washed away some substance generated by the muscle work which was producing fatigue by its presence and accumulation within the muscle. Mosso has gone a step further, and proved that the blood of an exhausted animal injected into one which had been kept at rest, produced the characteristic symptoms of fatigue. He was led to think of this experiment by observing that in soldiers who had marched long distances, the arms participated in the fatigue, although the leg muscles had done most of the work. This pointed to the fact that the fatigue was partly caused by something circulating in the blood.

This fact can be easily demonstrated by the following experiment:—Take a frog and subject its muscles to a prolonged electric stimulus, until they are completely exhausted and are incapable of responding to any further current, however strong. Now, after having killed the frog, pound the muscle substance of the limbs which have been subjected to the experiment, into a pulp in a mortar with a little distilled water, and filter. A little of the filtrate injected into a second untired frog, will render its muscles incapable of being excited by a current which would, in its normal state, produce energetic muscular contractions.

These toxic agents have to be removed from the system by the agency of the kidneys, and to a certain extent by the skin, and during the time of their elimination the individual suffers from fatigue. If these waste products are in excess, or if the mechanism by which they are removed from the system is out of gear, then symptoms of the irritable weakness known as neurasthenia is produced.

Moreover, in practice we constantly meet with cases of neurasthenia, evidently due to poisons, such as tea, tobacco, alcohol, and to toxins generated in the gastro-intestinal tract. We stop the indulgence in alcohol, or we wash away a mass of accumulated faecal matter from the colon, and the patient is soon restored to health.

(To be continued.)

TREATMENT OF UTERINE FIBROIDS—The rapid changes in the manner of treatment of these growths have produced a condition of doubt in the minds of many as to what course they should follow. Penrose, in a review of the subject, says: Hysterectomy is advisable in the vast majority of cases of fibroid tumor of the uterus; in all cases in which there are urgent symptoms from pressure or in which there are urgent subjective symptoms referable to the uterus: in all fibrocystic, edematous, and myomatous tumors; in all tumors of intraligamentous or subperitoneal growth; in all large tumors which have become decidedly abdominal; in all cases in which we cannot safely and surely remove all ovarian tissue and the whole of the Fallopian tube. The operation of castration should never be undertaken unless the operator is prepared to perform hysterectomy, should this be found necessary. The suitable cases for castration are hard fibroid tumors of small size, of such development that no pressure is produced, and when there are no marked subjective or reflex symptoms. In the case of an old woman who has passed the menopause, in whom the fibroid tumor has stopped growing, and in whom there is no discomfort from the size of the tumor or from pressure, operation is not indicated.—*Am. Jour. Obs.*

PATHOLOGY AND BACTERIOLOGY

IN CHARGE OF

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INFLUENZA.

The sequels of this disorder have only been studied with care in the course of the epidemics which have prevailed in the last seven years. They escaped the attention of the older observers. They are very numerous. It may be fairly affirmed that many of the gravest characters of the malady occur after the acute stage has passed away, and when convalescence is apparently assured. I think there has possibly been exaggeration in respect of some of the alleged sequels of influenza, still they are, as I have said, numerous. The general asthenic type of the disease is well recognized. The enfeebled mental and bodily states left behind it have been forcibly and sadly brought home to most of us late, both in our own persons and in our patients and friends. Recognizing the fact that each epidemic is signalized by a dominant form for the most part, we may discuss the particular sequels attending, first, the thoracic; secondly, the gastro-intestinal; and thirdly, the nervous varieties of influenza. The personal factor comes in here strongly in respect of each individual affected, and as has been said, "each patient convalesces according to his temperament," and, no less, I would say, his diathesis. Nearly sixty years ago, Sir Henry Holland noted the long persisting influence of this disease upon the constitution as a remarkable feature; also the variation of parts affected in different individuals, or at different periods in its progress. In respect of sequels ensuing on the thoracic forms, we may note the prolonged course of the peculiar broncho-pneumonia, so often fatal to the weakly and the aged in its earlier stage. Next the onset of tuberculosis. Abscess of the lung has been several times met with supervening on pneumonia, and Pfeiffer's bacillus has been found in the yellowish-brown sputa expectorated from it, together with elastic fibres from the lung.

Pleurisy is common and empyema may result. The heart is often severely infected. Great weakness of the organ is common; arrhythmia, bradycardia, tachycardia, and pseudoanginal attacks may occur long after the illness. Vertigo is a very frequent symptom, a tendency to it persisting for some months after the attack. The gastro-

intestinal variety of influenza may lead subsequently to vomiting, simple catarrhal jaundice, chronic gastro-intestinal catarrh, diarrhoea, or constipation, with marked nervous depression. The nervous variety is apt to lead up to many subsequent troubles. A rapid denutrition of nerve centres is more or less common in all cases presenting any severity in the early stages. Neurasthenia may prevail for one or two years subsequently. Polyneuritis is a common sequel. The arms may be paralyzed with both motory and sensory disturbance, and wrist-drop may occur; moreover, the same process may occur over large areas. Neuritis may involve cranial and other nerves locally. Encephalitis, myelitis, sclerosis of various tracts of the spinal cord, neuralgia, especially the intercostal variety, conjunctivitis, iritis, otitis media, mastoid abscess, malignant endocarditis, parotitis, orchitis, and lymphadenoma, with other affections, have been noted among sequels in various recent epidemics in parts of the world. Somnolence, or extraordinary drowsiness with hebetude, is a note-worthy feature. Headache, vomiting, and various mental disorders may occur. Melancholia leading to suicide is by no means uncommon. Mental incapacity long remains, and many patients affected in middle life tell of inability for efforts, mental and bodily, that were easy to them previously. They feel many years older in all respects. The natural level of health may never be regained, or not fully re-established for two or three years after a severe attack. Abscess of the brain has been several times noted as a sequel, also simple lepto-meningitis. Mental affections may also sometimes subside after an attack. The sequels of this disease are doubtless often very varied, and often extraordinary. A medical friend of mine has been unable to take coffee since he suffered from a severe attack in February, 1895, without feeling considerable cardiac discomfort, although there was no arrhythmia, and the heart sounds remained normal. In his case, too, and in another there remained for months subsequently a liability to prooxysms of low temperature, with extreme chilliness and distressing sensations; observations made in the mouth, axillæ, and rectum recording a temperature of only 96°. Such attacks continued to occur once in every eight or ten days,

and not infrequently in the night. (Nothing afforded so much relief as an ounce of whisky taken as hot toddy.)

Influenza, in common with other infectious diseases, distinctly appears to predispose to the onset of other diseases. The lowered vitality induced by the primary malady leaves the patient a more ready prey to the attack of any other he may be exposed to. Or a distant interval may elapse between the one disorder and the other. Translated into the language of to-day, we may substitute for the term "lowered vitality" a condition of the solids and fluids of the body in respect of their powers of resistance to invasion by specific toxins which is unequal to the struggle between them and the infection. It is also conceived by Broadbent and others that germs of disease may lie latent in the body and remain inoperative till the resistance of the host is impaired by some circumstance such as infectious or other illness, or traumatism, which forthwith liberates the latent germ with the consecutive onset of a fresh ailment. The occurrence, so frequently, of tuberculosis after injuries and infectious fevers, may possibly be explained in this way, also the development of tertiary syphilitic disorders.

Relapses of influenza are commonly met with, and may occur several times at fairly long intervals after the primary infection and long after the original epidemic has passed away. We may doubt the occurrence of fresh infection from without, as by sporadic influence, in many such instances, and I think we may consider as probable a view of this matter, for which I am indebted to our Registrar, Dr. Edward Liveing. He conceives it to be not unlikely that the toxins of influenza may act very much as does that of malaria, leaving behind it residues of specific infective matter, which wake up into activity from time to time, and induce fresh outbursts of the disease in response to any conditions which temporarily lower the general vitality of the body. We may thus regard such relapses as evidences of sequels of the direct residual class. I have experience of cases in which four or five attacks have occurred within two or three years, and at varying intervals. The conditions in respect of symptoms, type of pyrexia, and general character leave no doubt as to the true nature of the disorder, and intelligent patients, in three cases in the persons of well-known members of our profession, have recognized only too well the specific qualities of it.

Acute bronchocele has been several times observed to follow influenza. One lobe may become enlarged and give rise to dyspnoea, or orthopnoea with a fluctuating tumor. Incisions give exit to viscid fluid, with relief to the symptoms, but the discharge may continue to flow for months. One of the most remarkable cases I have seen occurred in a gentleman, aged 68, in whom great wasting had

occurred in the pectoral muscles. This followed an attack of influenza nine months previously. Twenty-eight pounds weight had been lost during that time. The ribs were plainly visible. There was marked difficulty of inspiration, and the upper portion of the chest hardly moved. There was no myxœdema. The brachial muscles were soft, but those of the lower limbs were firm. There was general weakness and early fatigue on walking. Improvement slowly followed treatment by massage, warm douching, and dosage with strychnine, phosphorus, and arsenic. This man was at one time apparently in peril from respiratory difficulties. There was evidently some focal myelitis in the cervical portion of the cord. Recovery ensued after treatment. Bladder troubles may set in and persist after an attack. Diabetes has been several times observed as a sequel. Arthritis and multiple synovitis sometimes follow influenza. At the outset of many cases it is sometimes difficult to be sure that rheumatic fever is not in progress. There may be pains in joints and pyrexia. The two disorders may even occur together and lead to a very grave condition, owing to carditis. Cases have been carefully observed in which symptoms of myelitis, involving several tracts in the cord as well as the cornua, have led to arthritis or true spinal arthropathy.—*Brit. Med. Jour.*

ANTI-TYPHOID SERUM.—In the course of a communication to the Paris Société de Biologie on February 22nd on the Early Diagnosis of Typhoid Fever by a Bacteriological Examination of the Stools, M. Chantemesse said that last June he had succeeded in immunising several horses against the virus of typhoid fever. He had obtained the serum of such strength, that one-fifth of a drop inoculated into a guinea-pig twenty-four hours before infection protected it against a dose of typhoid virus fatal to animals not previously injected with the protective serum. It was ascertained, also, that injections of the serum produced no injurious effects upon a healthy man. M. Chantemesse stated that he had since employed injections of serum in three cases of typhoid fever. The temperature showed a regular fall from the time the first injection was made, and seven days after the commencement of the injections all three patients were quite free from fever, and had commenced to convalesce. M. Chantemesse added that the cases were not yet sufficiently numerous to permit any trustworthy conclusion to be drawn.—*Brit. Med. Jour.*

Tomatoes are a powerful aperient for the liver, a sovereign remedy for dyspepsia and indigestion. Tomatoes are invaluable in all conditions of the system in which the use of calomel is indicated.

NOSE AND THROAT

IN CHARGE OF

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MODERN METHODS OF TREATING
DISEASES OF THE NOSE AND
THROAT.

BY O. B. DOUGLAS, M.D., NEW YORK.

Our interest in diseases of the nose and throat seems to centre upon treatment—that which cures. But first, we must have a knowledge of the diseases, and it may be well to know how we get them—the ætiology—and to consider their symptoms, complications, and effects.

Diseases of the nose and throat are more numerous—of more frequent occurrence—than at first thought we might suppose; there is a longer list of them, and a larger train of evil effects, than is likely to be recognized by one who has not carefully considered this matter. In the twenty minutes devoted to this subject I can hardly do more than mention a few of the commoner diseases, such as are of most frequent occurrence, and cause, in the aggregate, the most suffering.

Things we see oftenest impress us the least. We give more attention to the infrequent diseases than to those we are called oftener to treat. Common, every day conditions, lose their terror, however bad they may have seemed or really were. This law (of callousness) explains our indifference to a common cold, which often is but the initiatory stage of grave and fatal maladies.

President Lincoln is said to have observed that "the Almighty must consider common things important, for He made so many of them." These diseases are important because they are so numerous and so far-reaching in their effects. The opprobrium of our profession is not in curing common ailments, those little ills which, in the aggregate, cause greatest distress, not the rare, infrequent, obscure conditions.

Diseases of the nose and throat may be acute or chronic, simple or complicated, local or general, organic or traumatic, acquired or congenital, benign or malignant. An entire catalogue comprising the acute, subacute, and chronic stages would be long and tedious and not to our purpose. But we should be able to distinguish syphilitic, tuberculous, cancerous, exanthematous, diphtheritic, mycotic, traumatic, and other less important

conditions. We must recognize the peculiarities of various tumors; the condition of the numerous sinuses (accessory to the nose and throat), excessive or scanty secretions and their character, empyema, necrosis, etc.

We have coryzas, congestions, inflammations, hypertrophies, hyperplasias, atrophies, and ulcerations; not only these special diseases of the nose and throat, but many so-called constitutional diseases which affect these organs seriously. Of the two hundred and fifty more or less distinct diseases that flesh is heir to, a large percentage show effects in the throat, not mere complications, but as a part of the disease; we look there for confirmation of our diagnosis.

There are never two noses alike interiorly, any more than there are two faces alike; it requires the exercise of good judgment and a moderate degree of skill, often, to distinguish pathological from physiological conditions. Cultivated common sense is never out of place when called in consultation to a case of ordinary nasal catarrh.

That which in common parlance is termed catarrh is but a symptom, an expression or effect of a diseased condition. We do not think of bleeding as a disease, but as a result of traumatism or other cause. In the popular mind catarrh means indefinitely (as charlatans teach) a blood disease, a bad breath, difficult nasal respiration, a dry throat, enlarged tonsils, or bad taste. Patients will tell you their palate is down (meaning an elongated uvula), that they have pain in the nose, over the eyes, in the temples, or back of the ears; that they have a hacking cough, a frequent desire to clear the throat, and point to the suprasternal notch, saying, "There is all the trouble." These ills may result from one and the same cause; and I desire especially to emphasize the importance of determining first of all *the cause of that of which the patient complains.*

Having determined the cause, we seek to remove it. If it is a syphilitic sore throat, give "mixed treatment" if you wish, but you will oftener get positive results from the use of large, increasing doses of potassium iodide. I am in the habit of ordering twenty grains, in solution, to be taken in a glass of milk before eating, three times a day. This quantity is to be increased five grains each day until the desired effect is produced, unless

undue iodism results, when the medication may be suspended for a few days. Often three hundred grains in a day are taken by a patient. Locally, spray the diseased parts with peroxide of hydrogen and insufflate aristol.

Tuberculosis of the larynx is one of the most distressing maladies humanity is called to endure. Our modern methods of treatment have greatly lessened the suffering and resulted in positive cures in numerous cases. The principle which underlies the various methods of treatment is to destroy the germs in their local habitat by curetting, and applying either pure lactic acid three times a week, pure ichthyol (Dr. Berens' method), or a twenty-grain solution of silver nitrate (as practised by Dr. H. B. Douglass). A later method, which promises excellent results, is the injection of a twenty-five-per-cent. mixture of creosote by means of a special syringe devised by Dr. Chappell, through whose kindness I am able to show you the original instrument for this purpose. You can find a full account of his method in the *New York Medical Journal* of March 30th. Local treatment, other than to soothe and cleanse, is of little benefit, unless resort is had to these heroic measures.

Sarcoma and carcinoma are best treated by extirpation, if that is possible. Dr. Coley and others report some wonderful results from the injection of the specific germ of erysipelas into the tissues surrounding these tumors in cases where they cannot be removed.

In treating diphtheria and all acute inflammations of the throat mild medicines given often will serve you far better than harsh and heroic treatment at longer intervals. I do not believe that antitoxine has come to stay. Professor Winters recently gave us (at the New York Academy of Medicine) an *exposé* of its use in the Willard Parker Hospital for contagious diseases. It seemed to do more harm than good.

I know of no surer way to cure diphtheria than to attack it *in situ*. My method which has given best results is to begin at the earliest stage possible, and give the following medicines with unflinching regularity:

No 1:

R—Tinct. aconiti.	gtt. xx.
Tinct. belladonnæ,	3 ss.
Glycerini,	3 iv.
Aquæ gaultheriæ,	ad 3 iv.

No. 2:

R—Potass. chloratis.	} āā	3 ss.
Sodii bromidi.		
Glycerini,		3 ss.
Tinct. ferri chlo.r,		3 ss.
Aquæ,		ad 3 iv.

Dose: Half a teaspoonful for an adult.

These are to be given alternately every half

hour, thus bringing the doses fifteen minutes apart. This frequency may seem severe upon the patient, who gets little sleep during the first twenty-four hours, but we have a severe antagonist to combat, and must not relax our warfare till we conquer, which I expect to do with almost as much certainty as I should in a case of measles. In addition to Nos. 1 and 2 I should use a spray—often and freely—composed of twelve grains of carbolic acid in four ounces of limewater. All these preparations are agreeable to take. I give liquid nourishment freely, milk being ordinarily best, also whisky, sparingly at first, but sufficient to get the desired effect as a tonic. Bichloride of mercury may be of service sometimes. Intubation or tracheotomy is to be resorted to if necessary.

(To be continued.)

ACROMEGALY INVOLVING NOSE, PHARYNX AND LARYNX.—Sometime ago Dr. W. F. Chappell reported a case of this kind to the New York Academy of Medicine (*American Medical-Surgical Bulletin*). An examination showed that the inferior turbinated bodies were enormously enlarged; the other structures in the nasal cavity appeared normal. The uvula, the interior and posterior pillars, and the soft palate, were very much thickened; also the tonsils and their capsules. The lingual glands were much hypertrophied. An external examination showed that the larynx was very much enlarged. The epiglottis was thickened. The arytenoid cartilages and the ventricular bands were enlarged. The opening between the vocal cords was very small. While the patient remained quiet, respiration was only slightly impaired, but excitement produced labored breathing and a crowing sound during both expiration and inspiration. During one of these attacks of dyspnoea the patient died.—*Langsdale's Lancet*.

INFECTION THROUGH BOOKS.—At a recent meeting of the Société de Biologie, du Cazal and Catoin (*Minchener medicin. Wochenschrift*, 1896, No. 1, p. 22), detailed the results of an investigation to determine whether books were capable of transmitting contagious diseases. The streptococcus, the pneumococcus, the diphtheria-bacilli, the tubercle-bacillus, and the typhoid-bacillus were thus studied. Animals inoculated with cultures prepared from books contaminated with the products of the various conditions in which the organisms named were found developed the given affection. It is thus necessary to practice disinfection of books that have been used or in any contaminated by persons suffering with infectious diseases.—*Med. News*.

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Editorial.

COUNCIL MATRICULATION.

The prescribing of requirements for the registration of matriculants is one of the most important functions of the Council, and, therefore, no matter how high or how low the standard adopted, one would naturally look for differences of opinion regarding matters that require so much thought and consideration.

Though the various Universities have largely promoted mutual good feeling in accepting the leaving certificates issued by the Educational Department; they still reserve and exercise the right to conduct examinations to accommodate those who have not secured this standing, either through choice or failure.

The Medical Council has always sought to make its requirements work in harmony with the regulations of the Department, believing that such would fairly guarantee uniformity of attainment. Some outsiders have held that a certificate of Matriculation in any Canadian University should be accepted. This divergence of opinion was not a potent factor prior to last June when the Council unanimously took a radical step in ordering a more difficult examination to come into force in 1897.

As is known, during the recent session of the Legislature a growing dissent was expressed to the Government, and as a consequence, the Minister of Education introduced a bill for the purpose of fixing the standard. This contemplated legislation would have been somewhat drastic in character, and perhaps not in the interest of either the

profession or the public at large, as it would have lessened the existing requirements which cannot be said to be prohibitory in their nature; for, other things being equal, culture and liberal training have always the start in the race for usefulness, success, and popularity in its highest sense.

After the first reading of the bill the Hon. Mr. Ross courteously held a conference with the Legislative Committee of the Council, at which were also present the resident members. As a result of the deliberation a compromise was effected and the bill was withdrawn on the understanding that the members of the deputatiou would use their influence next June to secure the passing of a measure embracing the provisions of the agreement. The Executive Committee subsequently met and directed that all applications be accepted on these terms prior to their official adoption at the next session of the Council.

Space precludes giving the full text of the compact, but we mention in brief its features, which no doubt will form the basis of the contemplated enactment by the Council.

The standard remains practically the same as at present, viz.: the Departmental junior leaving with chemistry and physics. The department has instituted no supplemental examinations, and equivalents have not hitherto been allowed by the Council, consequently many deserving cases have not been provided for, and to relieve such disabilities the following conditions are laid down:—

1st. Any student in medicine after having attended not less than two courses of lectures at any chartered College or Medical School in Canada shall be entitled to take the primary examination, providing that the standing obtained at such examination shall not be allowed until the Departmental Certificate has been presented. This, without loss of time in the professional course, gives ample opportunity for students to pass the preliminary examinations, who failed, prior to entering on the study of medicine.

2nd. The Council will accept in lieu of the Departmental Examinations a certificate of Matriculation in Arts from the Registrar of any Canadian University, together with the proof of having passed the examination in Arts at the end of the first year.

3rd. Last June a vast number of petitions were forwarded to the Council praying for registration,

and setting forth an almost endless variety of equivalents, the majority of which could not be entertained without radically changing the regulations. To meet all worthy, back standing cases it is further provided that all who Matriculated in Arts in Canadian Universities prior to November, 1895, shall be eligible for registration.

The profession may well feel pleased that the problem has been happily solved, the standard should commend itself to all, and we trust that it will appear unaltered in the annual announcement for many a year to come.

THE PROPOSED LENGTHENING OF THE MEDICAL SESSION.

For several years past it has been felt by medical educationists that some change was urgently needed in the direction of lessening the congestion of the student's life while at college. It is well known that the amount of work demanded of students of medicine has increased by leaps and bounds during the past two decades, and yet the time devoted to its acquirement, and the methods in vogue as to didactic teaching, are practically to-day what they were twenty years ago. True, the summer session of eight weeks was introduced a few years ago, but has never been popular with either students or professors, or satisfactory in its working. The break in the holiday was at such a time, and of such a length, that it acted as a hindrance to many who could have profitably spent the whole six months at some other employment, or with a physician in his practice. Now, with the lengthening of the session to eight months the summer session might be abolished and still allow more time for preparation on the part of the student by several months than has heretofore been allowed.

Thus a four years' course of eight months each, will give thirty-two months devoted to regular college life, an increase of six months on the old arrangement and equal with the five years' course now on the *tapis*.

That such a course would be an improvement on what has existed in the past will not admit of doubt; and it is held by practical men and teachers that the four consecutive sessions of eight months each would be more satisfactory than four

sessions of six months each, one summer session and a fifth year of study.

It is to be hoped that if the Council see fit to make the change, which step will, we believe, be urged upon it at its next meeting, no increase in the number of lectures will be made, by some medical school, or department of a medical school, anxious to outshine all others by the amount of work done by its professors or lecturers. In our opinion medical students have been lectured to death for the past eight or ten years. They have been crammed and spoon-fed. From early morn to frosty eve they have been in attendance upon some teacher who filled them *secundum artem* with facts.

Time for study, reflection and discussion was wanting in the everlasting rush for lectures. This state of things was brought about largely by one school trying to make a better showing than the other, with the result that "the other" had to put on a spurt and keep an even showing as to lecturers, professors, clinics, laboratory courses, *et al, ad infinitum*.

Steps have been taken to memorialize the Council in this direction, a committee, consisting of representatives from all the medical colleges in Ontario having met for this purpose. It is to be hoped that in the Council wise enough counsels may prevail to consider well the suggestions of men who are actively engaged in teaching, and, therefore, in touch with the methods of to-day. We have always held that five years of professional study, together with the long study necessary for matriculation in medicine, is too much to pay for the whistle. As time goes on, and we notice the condition, financial and social, of the medical man in Ontario, we are more and more convinced that a five years' course would be prejudicial to the best interests of the country and of the profession.

THE ONTARIO MEDICAL ASSOCIATION.

The local committee of arrangements and the committee on papers and business of the Ontario Medical Association have been at work for two months past, the former in arranging for the entertainment of the Association, the latter in preparing a programme and other work of the Association. There being nearly 1,000 members

of the Association and over 3,000 doctors in Ontario, there should be a large gathering at Windsor in June. A general idea prevails among the members that the railways should be more liberal in their rates, not out of sympathy for the self-sacrificing medical men, who are tied down to their duties more strongly than other men, but from a purely business standpoint. The fare and one-third is such a pittance of a reduction that it offers little extra attraction to the medical man to take a trip. A special rate, say of \$2 or \$3 from Toronto, should induce 300 city men to attend, leaving 100 to care for the citizens while their *confreeres* are away.

From other points through the Province an unreserved and unqualified two-thirds, or, at least, one single fare would pay the railways and help the Association wonderfully; for the men who go once, go always.

Following is a partial list of papers and discussions which have already been promised by the members:—

Discussion in Medicine.—Treatment of Phthisis, W. J. Geikie, Toronto; Geo. Hodge, London; V. H. Moore, Brockville.

Discussion in Surgery.—Operation—Treatment of Mammary Carcinoma, W. Burt, Paris; A. B. Welford, Woodstock; G. T. McKeough, Chatham.

Discussion in Obstetrics.—Treatment of Puerperal Sepsis—H. T. Machell, Toronto; G. Acheson, Galt; H. Meek, London.

Occipito-Posterior Presentations—A. A. MacDonald, Toronto; Diphtheria, C. R. Charteris, Chatham; the Rational Treatment of Typhoid Fever, J. P. Armour, St. Catharines; the Differential Diagnosis of Typhoid Fever, G. R. Cruickshanks, Windsor; ———, A. McPhedran, Toronto; Anæsthesia, Crawford Scadding.

Dr. Victor C. Vaughan, of Ann Arbor, has consented to be present, and a number of other prominent American medical men have been invited.

TRINITY ALUMNI ASSOCIATION.

The fourth annual meeting of this growing and prosperous Society was held in Convocation Hall, Trinity University, April 7th.

The number of members in attendance was larger than ever before, and the meeting was an

unqualified success. The profession was well represented by Sir William Hingston, of Montreal; J. H. Carstens, of Detroit; P. D. Goldsmith, of Peterborough; and many others, who read papers and entered into discussions. A full report of the proceedings, issued as a supplement to this number of THE CANADA LANCET, makes any further notice of this part of the programme unnecessary.

The President, Dr. McKay, was unfortunately unable to be present at the meeting, but his place was ably filled by Dr. Stark, of Toronto. Dr. Clouse was in his place as Secretary, and deserves the thanks of every graduate of Trinity for the efforts put forth to make the meeting a success.

In the evening the annual banquet was held at the Rossin House, where a large number of members and invited guests gathered round the hospitable board. Dr. McKay was in the chair, and the occasion was one to be remembered by all present.

The speeches were, as usual, excellent, and every one went away feeling sure that the Association is doing a good work not only for Trinity but for the science of Medicine.

CANADIAN MEDICAL ASSOCIATION.

This Association meets at Montreal on August 26, 27, and 28th, when it is expected there will be the largest gathering that has been held for years. The Montreal men seem to have an affection for the Canadian Medical Association and will do everything in their power to make the meeting a brilliant success.

A fair sized nucleus of a programme is, we believe, already developing, and we feel sure that it will be equal to, if not ahead of any of the excellent programmes for which this old Association has always been noted.

It is unfortunate that in past years the Railway men have not seen their way clear to grant better rates to doctors attending Medical Associations. Without a doubt it would pay the railways through the increased number of men that would attend. Of course the objection is made that if they do this for one group of men, they will have to do the same for others, but the position of the doctor is entirely different for he pays his own way from start to finish and loses practices while he is gone; while the delegate to a conference has

his railway expense paid, has no hotel bill, and his work is there for him when he comes back.

MEDICAL EXAMINATIONS.

TRINITY MEDICAL COLLEGE.

PRIZE AND SCHOLARSHIPS.

Dr. Sheard's prize in Physiology in the First Year—W. A. Kerr.

SCHOLARSHIPS—*First Year*—1st, \$50, Wm. A. Kerr; 2nd, \$30, W. H. Marshall; 3rd, \$20, S. J. Hazlewood.

Second Year—1st, \$50; E. Shoemaker; 2nd, \$30, N. R. MacKay.

Third Year—1st, J. C. Ryan; 2nd, \$30, C. J. Copp.

MEDALS—*The Second Trinity Silver Medal*—Cloudesley Herbert Brereton. *The First Trinity Silver Medal*—William John Beatty. *The Trinity Gold Medal*—Harvy Clare.

FINAL ("FELLOWSHIP DEGREE").

Candidates who obtained 75 per cent. and over—Harvey Clare, William John Beatty, Cloudesley Herbert Brereton, George William Barber, Perry G. Goldsmith.

Candidates with First Class Honors—70 per cent. and over—F. J. Hart, A. A. Beaty, W. McQ. Teetzell, D. Jamieson, W. H. Weir, P. S. McLaren, J. R. McRae, G. S. Cameron, W. A. McIntosh, S. H. Corrigan, H. H. Milbee, C. H. Smith, S. D. Weir, W. R. Crowe, V. H. Hart, L. A. Marks, G. Welch.

Candidates with Second Class Honors—60 per cent. and over.—J. S. Nedd, H. S. Roberts, T. J. Bell, C. R. Sneath, E. H. Lapp, G. V. Harcourt, J. J. Elliott, J. H. Allin, J. A. Oliver, J. Gibbs, R. H. Foster, E. Doan, W. S. Harper, A. Ruppert, A. F. Reynar, T. J. Caldwell.

Passed.—H. G. M. Nyblett, H. J. Watson, W. G. V. Forbes, J. H. Dancy, J. R. McMurrich, J. J. A. Sutherland, J. P. Lee, G. B. Mills, J. B. Thomson, J. G. White, T. W. H. Young.

TRINITY UNIVERSITY.

Final Examination for M.D., C.M.

Gold Medal and Certificate of Honor.—J. R. McRae.

Silver Medal and Certificate of Honor.—H. Clare.

Certificate of Honor.—T. S. Cameron, W. J. Beatty, W. H. Weir, E. S. Hicks, T. V. Harcourt, D. Jamieson.

The following gentlemen were also admitted to the degree of M.D., C.M.:—N. J. Tait, V. A. Hart, C. H. Millbee, G. W. Barber, P. G. Gold-

smith, Miss T. G. Head, C. H. Brereton, J. S. Nedd, J. J. Elliott, J. Gibbs, W. M. Teetzell, W. A. McIntosh, W. S. Harper, J. H. Rivers, H. S. Roberts, S. H. Corrigan, J. H. Allin, A. W. M. Row, F. J. Hart, G. Welch, Miss M. H. Irwin, J. H. Oliver, J. D. Weir, E. A. Lapp, A. Ruppert, Miss A. Verth, J. B. McMurchy, R. H. Foster, W. G. N. Forbes, J. P. Lee, P. S. Maclaren, W. H. Taylor, A. A. Beaty, C. R. Sneath, C. H. Sills, C. H. Smith, L. H. Marks, T. H. Bell, E. B. Boyes. E. Doan, J. H. Dancy, T. H. Caldwell, A. F. Reynar, H. G. H. Nyblett, W. A. Kurtz, G. B. Mills, R. Moore, J. B. Thompson, E. A. Fraser, J. McDonnell.

REMEDIAL FOODS.—*The Times and Reg.* says: Celery is invaluable for those suffering from any form of rheumatism, for diseases of the nerves and nervous dyspepsia.

Lettuce for those suffering from insomnia.

Watercress is a remedy for scurvy.

Peanuts for indigestion. They are especially recommended for corpulent diabetes. Peanuts are made into a wholesome and nutritious soup, are browned and used as coffee, are eaten as a relish simply baked, or are prepared and served as salted almonds.

Onions are almost the best nervine known. No medicine is so useful in cases of nervous prostration, and there is nothing else that will so quickly relieve and tone up a worn-out system. Onions are useful in all cases of coughs, colds and influenza; in consumption, insomnia, hydrophobia, scurvy, gravel, kidney and liver complaints. Eaten every other day they soon have a clearing and whitening effect on the complexion.

Spinach is useful to those with gravel.

Asparagus is used to produce perspiration.

Carrots for sufferers from asthma.

Turnips for nervous disorders and for scurvy.

Raw beef proves of great benefit to persons of frail constitution, and to those suffering from consumption. It is chopped fine, seasoned with salt and heated by placing it in a dish of hot water. It assimilates rapidly and affords the best nourishment.

Eggs contain a large amount of nutriment in a compact, quickly available form. Beaten up raw with sugar they are used to clear and strengthen the voice. With sugar and lemon juice the beaten white of egg is to relieve hoarseness.

Fresh ripe fruits are excellent for purifying the

blood and toning up the system. As specific remedies, oranges are aperient. Sour oranges are highly recommended for rheumatism.

Honey is wholesome, strengthening, cleansing, healing and nourishing.

Cranberries for erysipelas are used externally as well as internally.

Lemons for feverish thirst in sickness, for biliousness, low fevers, rheumatism, coughs, colds, liver complaints, etc.

Blackberries as a tonic. Useful in all forms of diarrhœa.

Figs are aperient and wholesome. They are said to be valuable as food for those suffering from cancer; they are used externally, as well as internally.

Apples are useful in nervous dyspepsia; they are nutritious, medicinal and vitalizing; they aid digestion, clear the voice, correct the acidity of the stomach, and are invaluable in rheumatism, insomnia and liver troubles. An apple contains as much nutriment as a potatoe in a pleasanter and more wholesome form.

Grapes dissolve and dislodge gravel and calculi, and bring the stomach and bowels to a healthy condition.

Pie plant is wholesome and aperient; is excellent for rheumatic sufferers and useful in purifying the blood.

UTERINE INERTIA.—A query recently propounded to the *Medical Age* recalls a circumstance happening some fifty years ago in Scotland, and recorded in the *Med. Gazette*:

A farmer in the neighborhood of Edinburg, son of an eminent surgeon of that city, frequently had cows in great distress during accouchement, and now and then, perhaps, like other farmers, lost a cow, in the act of parturition. On one occasion, when a poor animal of considerable value had been suffering for a very long time, and there was every prospect of an unfavorable issue, and it seemed inevitable the creature must die undelivered, the owner hurried into Edinburg and took council with the eminent veterinary professor, Mr. Dick. At the suggestion of the latter, with all expedition possible, six or eight quarts of tepid water were thrown into the animal's uterus, the hind quarters being previously elevated so as to prevent a return of the fluid. The liquor amnii had com-

pletely escaped at the early stage of labor, and it was twenty-six hours after this event when Dick's ingenious device was applied; and by this means it was found by external palpation that the calf was once more floating freely in the womb cavity. The animal, however was so completely exhausted there seemed no hopes of the calf being expelled by natural efforts; nevertheless a few minutes after injection a vigorous pain came on and a live calf was delivered; the cow sustained no other ill consequences than a few days' weakness, the natural effects of previous suffering.

Commenting upon this fact the *Med. Gazette* added: "A neighboring surgical accoucheur in large practice was so much struck with the simplicity and apparent safety of the operation, that he subsequently adopted it, with unqualified success." In one instance it supplied a need that avoided the use of long forceps. On a second occasion, but for the water injection, turning and forcible delivery would have been indispensable to saving the patient's life. In many other cases by the injection of a quart of tepid water the patients were delivered of living children without any unfavorable symptoms ensuing."

It is remarkable this procedure has not obtained more general recognition, since its value does not admit of a shadow of doubt; and with modern aseptic measures there is no reason whatever why it should not become a general procedure, thus obviating long suffering, often the need for forceps, preventing further exhaustion to the patient, and avoiding the accidents that of late are of too frequent occurrence, resulting in torn and lacerated perineums.

PROPRIETY vs. DECENCY.—In New York a certain society of women, says the *Medical and Surgical Reporter*—presumably of the new kind, though with some very old-fashioned and disreputable notions—is endeavoring to secure State legislation providing that only married physicians be employed as assistants in insane asylums where women are confined. It trusts that the good sense of legislators will check the effort to enact such a bill. Prudishness rests on a substratum of nastiness, and the present movement deserves the hearty condemnation of the medical profession, as of all clear-minded men and women, for a variety of reasons.

You are right, dear *Medical and Surgical Reporter*. New York is not the only city on this continent in which strong (*sic*) minded women, and weak-minded men, dabble in nasty matters, and sometimes secure legislation which is not only a disgrace to the intelligence of the 19th century, but a standing menace to the health of our young men and the chastity of our young women.—[Ed.]

THE Detroit and Cleveland Steam Navigation Company's steamers are now running daily (except Sundays) between Detroit and Cleveland. When travelling East or West, North or South, try to arrange to take advantage of these luxurious steamers between Michigan and Ohio. If you are contemplating a summer outing, write A. A. Schantz, G. P. A., Detroit, Mich., for illustrated pamphlet, which gives full information of a trip to Mackinac via the Coast Line.

Books and Pamphlets.

SAUNDERS' AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Edited by George M. Gould, A.M., M.D., assisted by eminent American physicians and teachers. Philadelphia: W. B. Saunders.

Notwithstanding the rapid multiplication of medical and surgical works, still these publications fail to meet fully the requirements of the general physician, inasmuch as he feels the need of something more than mere text-books of well-known principles of medical science. Mr. Saunders has long been impressed with this fact, which is confirmed by the unanimity of expression from the profession at large, as indicated by advices from his large corps of canvassers.

This deficiency would best be met by current journalistic literature, but most practitioners have scant access to this almost unlimited source of information, and the busy practitioner has but little time to search out in periodicals the many interesting cases, whose study would doubtless be of inestimable value in his practice. Therefore, a work which places before the physician in convenient form an epitomization of this literature by persons competent to pronounce the value of a discovery or of a method of treatment cannot but command his highest appreciation. It is this critical and judicial function, assumed by the

Editorial staff of the "American Year-Book of Medicine and Surgery."

The editor, whose experience peculiarly qualifies him for the preparation of this work, not only review the contributions to American journals, but also the methods and discoveries reported in the leading medical journals of Europe, thus enlarging the survey and making the work characteristically international. These reviews are not simply a series of undigested abstracts indiscriminately put together, nor are they a retrospect of "news" one or two years old, but the treatment presented is synthetic and dogmatic, and includes only what is new. Moreover, through expert condensation be experienced writers, these discussions are comprised in a single volume.

The work is replete with original and selected illustrations skilfully reproduced, for the most part, in Mr. Saunders' own studios established for the purpose, thus ensuring accuracy in delineation, affording efficient aids to the right comprehension of the text, and adding to the attractiveness of the volume.

PRINCIPLES OF BACTERIOLOGY. By A. C. Abbott. Philadelphia: Lea Brothers & Co.

The appearance of a third edition of this book, after a year's interval since the publication of the second edition, in itself attests the popularity this work has attained among those interested in Bacteriology. It is well-printed, clear, concise and thoroughly up to date, and is, consequently, especially well suited for the use of the medical student, and the busy practitioner who has not time to wade through more voluminous works. Altogether it is a very satisfactory book.

COLOR-VISION AND COLOR-BLINDNESS. A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M. D., (Univ. Penna.), Formerly Clinical Assistant Royal London Ophthalmic Hospital (Moorfields); Lecturer on Ophthalmology and Chief of the Eye Clinic in the Beaumont Hospital Medical College; Ophthalmic and Aural Surgeon to the St. Louis Mullanphy and Methodist Deaconess Hospitals; Consulting Oculist to the Missouri, Kansas, and Texas Railway System; Fellow of the British Laryngological and Rhinological Association; Secretary of the St. Louis Medical Society. Illustrated with one colored full-page plate and twenty-one photo-engravings. Crown octavo, 110 pages; Cloth, \$1.00 net. Philadelphia: The F. A. Davis Co., Publishers.

SUPPLEMENT TO "CANADA LANCET."

TRINITY ALUMNI ASSOCIATION.

The Fourth Annual Meeting of the Trinity Alumni Association was held in Convocation Hall, Trinity University, April 7th.

Vice-President Dr. T. H. Stark, occupied the chair.

The report of the secretary, Dr. Elias Clouse, showed the Society to be in a flourishing condition. The report recommended, among other things, the establishing of an annual alumni prize to the member presenting the most meritorious essay on some subject in medicine.

The following officers were elected for the coming year:—

President, Dr. J. C. Mitchell, Enniskillen; Vice-Presidents—Western Ontario, Dr. J. W. S. McCullough, Alliston; Eastern Ontario, Dr. Douglas, Cobourg; Toronto, Dr. Allan Baines; Quebec, Dr. Astley, Quion; New Brunswick, Dr. Wade, St. Andrews; Nova Scotia, Dr. Fraser, Halifax; Prince Edward Island, Dr. C. A. McPhail, Summerside; Manitoba, Dr. W. A. Thompson, Douglas; British Columbia, Dr. E. A. Hall, Victoria; United States, Dr. Williams, Saginaw; Treasurer, Dr. Pepler, Toronto; Secretary, Dr. Elias Clouse, Toronto; Assistant Secretary, Dr. J. G. Wishart, Toronto; Graduates' representative, Dr. F. H. Stark; Faculty representative, Dr. D. J. Fotheringham; Auditor, Dr. H. B. Anderson.

Dr. N. A. Powell and Dr. J. MacMaster gave a demonstration of shadowgraphy by the "X" rays of Röntgen.

Dr. N. A. Powell outlined the *modus operandi* of the production of the pictures, pointing out the special apparatus needed. He presented shadowgraphs of screws and nails which had been driven into pieces of wood, a Murphy button, a calculus from the bladder, a pair of intestinal clamps, two bullets 45 calibre, and two coins, which they had to borrow. The exposure was made under a bell jar, and lasted two minutes.

He then referred to the surgical conditions in

which the rays might be useful as a means of diagnosis.

Dr. J. MacMaster said that the storage cells used produced a current of $14\frac{3}{4}$ volts which transmitted to the secondary coil gave a current of from 12 to 200 thousand volts. The interruptions numbered from 400 to 450 per minute. The Crooke's tube, he explained, was a glass bulb from which the air had been exhausted until only one-millionth of an atmosphere remained. The current passing through this tube produced the cathode rays. These striking against the glass make an inflorescence. They could be deflected like ordinary light. Ordinary light when passed through a prism gave various visible colors of the spectrum. But at each end there were invisible rays—the infra-red and the ultra-violet. The infra-red produced heat, while the ultra-violet were actinic. These ultra-violet rays were in certain respects like the cathode rays.

Issuing from the bulb directly opposite the cathode rays come the "X" rays. Some suppose them to be produced by the collision of the cathode rays on the glass, setting up certain pulsations in the glass, or molecular vibrations of the ether between the molecules of the glass. Others suppose the action takes place outside entirely. One school believes that they are simple rays, in many respects like light rays, consisting of short vibrations of ether. Another school holds to the view that the molecules of air left in the tube becoming highly charged with electricity, become split up, owing to their bi-polar condition, the positive going to the negative pole and being repelled, and produce the rays by striking against the tube directly opposite.

Dr. Teskey then read a paper on "Some Special Cases of Appendiceal Abscess." He said he felt like apologizing for presenting a subject about which so much had been said. It seemed to him that there was nothing about it with which they were not all familiar. He reported two cases

which he thought presented sufficient special characteristics to make them worthy of attention.

The first case was that of a young man aged 21. He was taken ill for the first time with symptoms of inflammation in the abdomen. In ten or twelve days he, the essayist, was called to relieve him surgically, the medical attendant having satisfied himself that the patient was suffering from inflammation or abscess of the appendix.

The case was an extreme one, life being in great danger. The abdomen was distended, especially in the lower zone, the point of maximum expansion and resistance being about $1\frac{1}{2}$ inches to the right of the middle line and close above the inguinal canal. The whole surface of the abdomen was resonant on percussion. He dare not palpate with any freedom. Suspected the case was one in which the abscess was in the pelvis; a digital examination of the rectum confirmed the suspicion. In view of the general resonance, it became a question as to where the incision should be made. Finding some slight resistance just above the anterior superior spine of the ilium, I made a small incision through the abdominal wall and found the intestine adherent to the peritoneum. The finger was passed behind in the iliac fossa, downward over the brim of the pelvis, just beyond the pulsating iliac vessel. Did not reach the abscess. He felt the danger was too great to persist further from that point. He then opened, according to the usual rule, at the point of greatest prominence beyond the inguinal canal. Found the small intestines agglutinated, forming the roof of the abscess. By carefully insinuating the finger between the abdominal and pelvic wall, and at the same time approaching the general peritoneal cavity by pressing the anterior wall back against the viscera, he found his way into a large abscess, from which ten or twelve ounces of fetid pus escaped with great freedom. Exploring the cavity with the finger, he found that the small intestines had been completely lifted from the pelvic basin, the bladder and the rectum forming the pelvic wall. He washed out and drained, and an uneventful recovery followed, except that after 24 hours the abscess drained partly from the first opening, and the first opening was the last to close.

The second case was also a young man about the same age. It was a primary attack and had lasted seven days before the attendant made up his mind that operative procedure was necessary. The patient then was in an extreme condition seeing that a very large amount of septic absorption had taken place. He opened over the point of greatest prominence, resistance and tenderness, about two inches to the right of the umbilicus.

The whole area of the abdomen was resonant on percussion. There was no resistance in the right iliac fossa above Poupart's ligament. Here

again he thought the peritoneal cavity would have to be traversed, believing the abscess was behind the colon. He opened the point of greatest prominence above the crest of the ilium, behind the anterior spine, making a short, oblique incision and he found again a free peritoneal cavity. Lifting the small intestines and the omentum, he found the colon and cæcum lifted forward by the pus. The reflection of the peritoneum from the colon to the posterior abdominal wall was protruding, and formed the abscess wall. Was opened fully. The general peritoneal cavity was protected by pressing the anterior abdominal wall against the viscera. Exploring the cavity, he found a gangrenous slough which came away and which was probably the extremity of the appendix. By careful examination, found the appendix lying close beside the cæcum and beneath the peritoneum. The patient made a good recovery.

Dr. Teskey said that he wished to refer to one or two points in connection with the cases. First, as to the delay in diagnosis. Those in the habit of meeting a great number of cases of abscess in the appendix, had very little difficulty in diagnosing the condition almost at its very commencement. But there was a large number of physicians whose attention was not fully drawn to this disease, who let preliminary symptoms pass over, the case becoming an extreme one before the surgeon was called to his assistance. As to the cause of delay in the diagnosis, in certain cases it was due to the absence of a certain feature which was spoken of as being constant in appendiceal inflammation—McBurney's point, midway between the umbilicus and the anterior superior spine of the ilium. However ready we might be to acknowledge that point as being the tender point in connection with the disease, it was not essential to inflammation of the appendix. Very frequently the tender point was not located in that vicinity but some distance from it. In one of the cases he reported, it was low down near the mid line, above the inguinal canal. The attending physician for a considerable time thought he was dealing with an inflamed bladder, there being frequency of micturition. The case was allowed to go on because too much stress had been put upon McBurney's point. In the second case there was no special tenderness in the iliac fossa nor any especial fulness nor resistance. It was two or three inches behind this. In this case the physician overlooked the nature of the disease, believing he was dealing with some kidney trouble. Another rule laid down was that the spot of greatest prominence and tenderness in the place in which the incision should be made. He said it may be found necessary to deviate from that rule in certain instances. Wherever abscess had been diagnosed in the abdominal cavity, it was wise, if possible, to relieve the condition by a sub-peritoneal operation or,

what was equivalent to that, opening into the cavity, the collection of pus having been shut in by adhesions so that the general peritoneal cavity was not invaded. In the first operation, he tried to get into the abscess cavity, through the first incision but his finger was unable to reach it. Then he operated directly over the point of greatest prominence, but that he must have been near the cavity in his first exploration was shown by the fact that it began to drain from that opening within twenty-four hours.

In the second case he varied from the rule of incising over the point of greatest tenderness, near the umbilicus, but he made an incision far back near the crest of the ilium, an oblique incision, near the lumbar region to get down to the side of the colon. He expected on account of the condition of the lower part of the abdomen, and the iliac fossa that the abscess was behind the colon where it proved to be. It was what had been called a lumbar typhlitic abscess. Opening the peritoneum in that position, he found himself in the free peritoneal cavity so that in operating he traversed the cavity. This was a dangerous proceeding but it was not necessarily fatal. The cavity was preserved in this way; there was a degree of tension in the abdomen always existing. There was a tension from within outward. If one opened into an abscess and made pressure on the upper part of the abdominal cavity, this continued to make the tension from within outwards. He thought the fresh pyogenic germs falling on the wounded surface, if immediately washed off, did little or no harm. It was when the germs had sufficient time to work beneath the surface and enter the mouths of the lymphatics that the almost irreparable damage was done to the peritoneum. He thought in this case it was unwise to hunt for the appendix or break down the adhesions. He was satisfied with irrigation and drainage. In the second case, of course, he removed the appendix, as it was easily got at.

Dr. Grasett said he thought McBurney's point should always be looked for. If in a certain case the point of greatest resistance and tenderness did not lie in that position, it would be noted somewhere else, as in the two cases reported, in the vicinity of the bladder and kidney respectively. A careful sifting of the other symptoms would help to make the diagnosis clear. The point of greatest difficulty was to know when to operate. He found himself in a very grave quandary in regard to this point.

Dr. Geo. A. Bingham said the question of when to operate was a most important one. We had three methods before us: the modern American one of removing every appendix that came within sight; secondly the conservative English one of waiting for the formation of abscess; and the intermediate one, which he thought was the proper

method, first of making a diagnosis and then having the patient under constant supervision until symptoms pointed out the necessity for operation. If the symptoms indicated an increase in the inflammatory condition, or if they indicated a lowering of the condition of vitality, operation should be done at once. If a temperature of, say, 103° or 103½° for several hours with a fairly rapid pulse drops a degree or two suddenly, that was an exceedingly important symptom, and if these symptoms became grave, operation should be done at once. The tenderness of the McBurney point he believed to be due to the fact that the nerve supply was greatest at the junction of the appendix and cæcum. As this was a movable spot the point of maximum tenderness might not be found on or under that spot on the abdomen that carries the name of McBurney.

Dr. Merritt, of St. Catharines, referred to four cases he had recently seen, two of which he had operated upon. They were all different. He had found it difficult to decide just when the moment had arrived when he should operate. He had never found much difficulty in diagnosing the condition. The question of operation in places where expert help was not at hand was one of greater moment than in the large cities where consultation and operation could be secured in a very short time. In one of the cases he had not removed the appendix, for which he had been chided, but he was pleased to know in doing this he was in accord with the views of the leader of the discussion.

Dr. Carstens, of Detroit: I think the only proper place for the appendix is in a bottle of alcohol. (Laughter) It is a very difficult question to decide when to operate and when not to. I think as one's experience increases the more he will gravitate to the opinion one should operate as soon as the diagnosis is made. The many lamentable cases I have seen as a result of procrastination makes my heart ache to think of. I feel like a sinner when I think of my conservatism.

He had seen cases where the temperature and pulse were diminishing and the patient seemed to be improving; he would wait till the next day. But in 24 hours the patient was dead. He had had this experience over and over again. There was very slight danger in cutting down and taking out the appendix before it ruptured. Ordinarily there was no trouble in making the diagnosis. It was wonderful how many cases physicians would see as soon as their attention was called to it. He had been called out to a case in Michigan by a practitioner who had had seven or eight cases during the summer. Ten years ago he never had a case. The cases then died of idiopathic peritonitis; and "The Lord's will be done" was the consolation. The speaker thought there was not one case in a thousand of idiopathic peritonitis. Richardson had shown that out of every one hundred

cases of peritonitis 96 were due to appendicitis. The others were due to malignant growths, perforation of gastric ulcer, etc., all suitable for laparotomy anyway. As soon as he saw a case of peritonitis he called it peritonitis, McBurney's point or no McBurney's point, tumor or no tumor. And he would not make a mistake once in twenty-five times. Out of forty-five cases he had say three deaths following operation. But if treated medically quite a large per cent. might recover from the primary attack, but many would subsequently succumb. Only last week he was called to see a case where the patient was *in articulo mortis* and was asked by the physician to operate. He asked the medical man if that was fair to ask him in when the patient was dying. Why was he not called two weeks before? Now, when all hope of saving the patient was past the old fossil wanted to shift the responsibility on the shoulders of the surgeon.

Dr. Teskey in closing the discussion said he was disposed to agree that it was wise to operate when the diagnosis was made.

AFTERNOON SESSION.

Dr. P. D. Goldsmith, of Peterborough, read a paper on "Broncho-pneumonia," which appears in this number of THE LANCET.

Dr. J. L. Davison complimented the reader on his excellent paper, particularly on his presentation of the treatment of cases of broncho-pneumonia. Much was seen in these days in our scientific books about the pathology and diagnosis of disease. Old methods of treatment where the *rationale* could not be scientifically explained, were not advocated. What Dr. Goldsmith had recommended, he had found from experience to be beneficial, and that was, after all, the test of a remedy. In regard to poulticing, he, like the essayist, considered it a most useful form of treatment in these cases. It was not fashionable nowadays. Our grandfathers found this did good, although they did not understand the question of reflexes. Dr. Davison recommended whisky instead of brandy as a stimulant, because it was a purer spirit. For the diarrhoea he found nothing better than liquor hydrarg. per-chlor. in five to ten drop doses, particularly where there were mucous and bloody discharges with tenesmus. Its action was not rapid, but it was certain. As a bronchial sedative he preferred codeine to opium. In chronic cases where resolution was slow, as a slow and steady counter-irritant, he found the best results from applications of ung. hydrarg. ox. rub.

Dr. Shaw, of Clinton, believed where poulticing was properly carried on it acted well. But in a country practice where skilled nursing could not be procured, it was difficult to get it done right.

Dr. J. H. Carstens read a paper on "The Exploratory Incision in Abdominal Surgery, Its

Indications and Technique," which will appear in the June number of THE LANCET.

Dr. Temple said, in discussing the above paper, that he could not agree that it was a proper thing to do, as the essayist had in his first case—to remove the appendages for hystero-eliopsy. It was generally agreed that operation was not justifiable in such cases. He was not prepared to agree that pelvic cellulitis did not exist apart from puerperal cases and pus tubes. He had seen its existence in numbers of abdomens he had opened, he had observed the condition. He agreed that 96% of cases of peritonitis were due to disease of the appendix. He was sure many valuable lives would be saved by promptly opening the abdomen and looking for the offending appendix. Where cases remained obscure after all other means of diagnosis had failed, he agreed that an exploratory incision was justifiable. In deciding when to operate he said it was not wise to depend on the temperature. The pulse was a far better guide. He had opened the abdomen in cases of appendicitis, and found collections of pus, when the temperature was normal. His practice was to stitch up the incision *en masse* rather than by the tier method advocated by Dr. Carstens.

Dr. Hingston, discussing Dr. Carsten's paper, said he could not agree that 96 out of every 100 cases of inflammation of the peritoneum were from the appendix. He said he also took exception to the statement that an exploratory incision was justifiable to establish a diagnosis. In his experience, of thirty years, he had met with only two cases where he was unable to diagnose the condition. In these days the abdomen was entered with too much impunity. He was at variance with the essayist in saying that the physician should always call in the abdominal surgeon in these cases of appendicitis. That always meant operations. Another thing: he would not remove the ovaries where the symptoms were purely subjective. In closing the abdomen, he used the *en masse* suture. Sir William held that the prevalence of ovariotomy was having a very detrimental effect on social life.

Dr. Teskey thought there was too great a tendency to run into specialties in surgery. The man who could remove a limb and stop hæmorrhage should be able to open the abdomen. The abdominal surgeon should only be one through expediency; he should always be able to do general surgery as well. As to cellulitis, all that was necessary was an irritant in the cellular tissue or lymphatics, no matter how it got there. Mechanical injury to adjacent bone, abrasion of the vagina or the cervix, etc., allowing the entrance of the germ to the lymphatic spaces, would produce pelvic cellulitis. And that was all there was about it. In obscure cases, when other diagnostic means failed, exploratory incision

to determine the condition was allowable. It was not allowable in pelvic neuroses. As to the choice of site for the incision, the essayist had shown a preference for the linea alba and semi-lunares. He (the speaker) rather chose to have more liberty. In many cases he preferred to cut through the abdominal muscles. A small incision to be afterward enlarged if necessary, through the external oblique, then an incision through the internal oblique (especially in appendix cases) in a line with the aponeurotic fibres, which are intimately connected with the transversales. Practically one could not distinguish between the two. In closing up, where the abdominal wall was thick with adipose tissue the layer suture was preferable, first stitching the edges of the peritoneum with cat gut; next the two inseparable layers of the transversalis and internal oblique also with cat gut, using a mattress suture; and, most important of all, the external oblique aponeurosis with a mattress suture. This made a very strong abdominal wall, and there was little or no danger from hernia.

Dr. Carstens said it was never right to remove healthy ovaries, as in hysterio-epilepsy. Ovariectomy would not cure epilepsy. He had to refuse such cases every day, but it did no good, because somebody else would do the job. Regarding the social aspect of the question, he held there were two sides. Those who held the side opposite view to Dr. Hingston argued that "this sort of woman was no good. Better to take em out, anyhow. Don't want this kind to breed, would breed epilepsy, hysteria, drunkenness, insanity." However, he drew the line on disease. He did nearly two hundred abdominal sections in a year, and had yet to see a single case of pelvic cellulitis. His contention for the exploratory incision was that it should only be used as a last resort for diagnosis. But he considered it a perfectly justifiable proceeding, the risk being comparatively small. There was some risk about any operation in which an anæsthetic was used. He disagreed that a general surgeon could do all sorts of surgery. He (the speaker) found his time completely taken up in this one line of work and reading the literature of the subject in three languages. As to his relation to the general practitioner the specialist could not divorce himself from him, as his own work depended entirely on the general practitioner.

Sir William Hingston then delivered the address in Surgery. He said that not being aware, till he arrived in the city, that he was to address full-fledged medical men instead of students, he was somewhat taken aback, and much that he had intended to say would not be *apropos*. He would, therefore, ask to be pardoned if he were somewhat rambling in his remarks on the progress of surgery. Much of what he had decided on saying had come out in the previous discussions, as, for

example, the question of operation for diagnostic purposes, and the question, when to operate.

While literature, philosophy and general science had advanced with accelerated movements, giant strides were those of surgery. Its exponents had performed operations of dazing moment, they had become bold and reckless. They enter every cavity and every viscus of the body. And who would say we had reached the *ne plus ultra* limit yet? It was within memory that injury of the brain could not be located. Brain lesions then wrapped in mystery, are to-day appreciable and curable. As Kepler predicated the existence of another heavenly body, by its effects on others, before it had been discovered by the telescope, in like manner, lesions within the cranium, not seen before, could be located by their effect on remoter parts of the body. A catalogue of the pathological conditions of the brain and nerve centres could be fully established. In that department alone we were able to see that surgery was beginning to be a science. Hitherto it had been an art. But when we saw an affection of the wrist, ankle, shoulder or elbow, and could say precisely what part of the brain was affected, we had left the region of conjecture for that of absolute precision, as much so as Kepler, who, when he saw no planet, foretold there must be one there because it disturbed the whole, and later a powerful telescope brought the heavenly body into view. Such men as Ferrier and Horsley, had raised the art of surgery to a science, so far as brain surgery was concerned.

Sir William then spoke of other changes in other departments of surgery. As to epitheliomata of the face, there was a time when these were removed completely with the knife. For many years it had been his practice not to treat them in this way. He had kept them under control twenty-five or thirty years. There was epithelioma and epthelioma. For certain forms the knife must cut at once, otherwise life would be lost. As to cancer of the tongue, he was surprised from time to time to hear the enquiry made as to how much should be removed. Syme laid down years ago that the partial removal of the tongue was wrong in principle, and that view he (the speaker) had endorsed. This was the rule no matter how small a part of the tongue was affected. In some cases, it was difficult to tell whether the disease was malignant or syphilitic; but a few weeks of specific treatment would determine the condition. Formerly it was the custom to remove the tonsils. Experience has now shown that this was unnecessary. These organs enlarged and diminished with the hygrometric conditions of the atmosphere. He had noticed this particularly in one family. He rarely removed tonsils now.

Regarding empyæma he considered surgical interference necessary. Some favored aspirating,

others a small or large incision, others the removal of a portion of the ribs. Each was applicable to certain cases. If the effusion is purely serous aspiration was inadmissible, we were not warranted in admitting air. Where pus was present incision might be made, but, he believed, that an early excision of the rib was the very best possible practice. This had been his practice for some years. If the opening were not free, there was much danger of pæmic poisoning.

Dr. Hingston then pointed out the advance made in the differential diagnosis of pericardial effusion from cardiac hypertrophy. The former condition could now be relieved with a fair degree of safety, and give a most successful result.

The surgeon should be able to verify for himself the conditions he might be called on by the physician to treat. The seeming immunity with which the abdominal cavity was opened has led to the performance of laparotomies to an almost unwarranted extent. They were first performed in hospitals and then in private. It was generally supposed that better results were got in hospital practice. Such was not the case. Given a good intelligent nurse, and a good house in the country with windows all around and he would prefer to operate there, rather than in the best hospital. His most satisfactory operations had been performed miles and miles from the hospital, where he had a general practitioner who would carry out suggestions and instructions thoroughly. That little extra gut, the appendix, was receiving extraordinary attention. The surgeon should be ready at all times to operate where the operation was called for.

The question of when to operate was answered differently by different surgeons. There was no question in surgery which gave him so much uneasiness to decide. He had declined to operate on many occasions and did not regret it, except in two cases. He called to mind twenty-three cases where he felt it his duty to oppose operation, and so far as he knew to-day the patients were in the enjoyment of perfect health. It had been hinted that there was a surgical aspect to the question, but he believed that did not apply to surgeons in this northern land.

The operations on the appendages were diminishing, because the appendages were diminishing. The frequency with which these ovaries were being removed was becoming an important social question, and legislation might be required to limit the circumstances under which they shall be inter-

ferred with. In this matter the offences were not committed in the hospitals, but outside. A lady had recently informed him she had been at a small party of women where the subject of ovariectomy came up, and personal experiences were related. What was found? There was not an ovary around the table. Were these operations performed by men of eminence? No. But by the smaller men in the smaller villages. He recalled a society he attended in another country in company with one of the most accomplished living pathologists. One member produced an ovary; another produced two; a third two. The morbid anatomist picking them up, examined each carefully and found nothing pathological in any of them!

Latterly we had heard much of the supra-pubic method for the treatment of stone in the bladder. It was an admirable method where the stone was too large and too hard to be removed by the lateral method, and too hard to be seized by the lithotrite. If over or under three ounces the lateral method should be employed. The lithotrite should be used in all cases of children over five and in adult males over sixty-five up to the time at which the prostate begins to become troublesome. This should be done in every case where the stone is not too large nor too hard. The success of the operation for stone depends on the choice of operation.

Great advance had been made in the treatment of stricture. He remembers when a soft bougie was used to dilate the urethra gradually. It required from three to nine months, and then the results were unsatisfactory. The French introduced the method of forcible dilatation; then division. These were good methods, but were abused, and hence fell into disuse. Then came the method by internal urethrotomy. It appeared to him that a combination of external and internal division gave the most permanent results.

In concluding the Dr. pointed to the danger of devoting too much attention to specialism. No separate department of surgery, when isolated from its surroundings for the purpose of inquiry, could of itself become an art. Its departments were like the word or clauses of a sentence, each of value in its place, but of no value when alone. Every man before he enters any special department of surgery should spend at least five years of his life in the pursuit of general medicine and general surgery.

A hearty vote of thanks was accorded to the gentlemen who had contributed to the programme.