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THE
MONTREAL MEDICAL JOURNAL.

Vol. XXVIII.

JULY, 1899.

No. 7.

Original Communications.

ON THE TREATMENT OF TUBERCULOSIS.*

BY

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It has long been the habit of the profession to regard phthisis as a well-nigh incurable disease; and such it undoubtedly is in those advanced cases, where the original infecting micro-organism has not only gained a firm footing, "but has called in auxiliary microbes to complete its ravages, and the patient has become the prey of a mixed infection." But in the earlier stages of the disease, to regard it as incurable is to paralyze our efforts and to lose for our patient the one golden opportunity of re-establishing health. During the past decade our appreciation of the curability of phthisis has certainly increased many fold. This increased confidence on our part in dealing with the disease, is to some extent due to the recognition on the post-mortem table that the spontaneous healing of local tuberculosis is an every day affair (Osler). Dr. Ransome states that 20 per cent. to 30 per cent. of all persons dying in hospitals between the ages of 25 and 75, show signs of healed tuberculous lesions (*Practitioner*, June, 1898, p. 564). The possibilities for successful treatment have been also increased by the fact that we are now able to make our diagnosis from a bacteriological examination of the sputum, at a distinctly earlier stage than formerly, when we had to rely on physical signs alone, or on the insidious and by no means distinctive symptoms from which many at the onset suffer. But the greatest encouragement to the profession has arisen from the brilliant clinical results which have followed the open-air method of treatment, a method first practised by Dr. George Bodington, of Warwickshire, England, in 1840 (*N. Y. Medical Journal*, Jan.

* Being a contribution to a discussion on the "Prevention and Cure of Tuberculosis," at the Montreal Medico-Chirurgical Society, April 17th, 1899.

14, 1899), and twenty years later successfully conducted by Dr. Brehmer, in Göbersdorf, in Silesia. During the past decade this plan of treatment has been carried out in many sanatoria scattered throughout Germany, Switzerland, France, Russia, Norway, and in our own immediate neighborhood by Dr. Trudeau in the Adirondacks. The statistics of these sanatoria show that in from 25 per cent. to 40 per cent. of the cases received for treatment, the disease is arrested and apparently cured, while two-thirds or more show great improvement; nevertheless, it is to be emphasised, that such statistics apply only to those cases in which the disease is recognised in an early or very moderately advanced stage.

As soon as the diagnosis of tuberculosis is made, both physician and patient should recognise the fact that the best, often the only chance of restoration to health lies in the adoption of thorough measures. While the physician should at all times endeavor, in the statement of hard and often cruel facts to exercise tact and judgment, that physician takes a grave responsibility who purposely deceives his patient, and permits the important early stage to be wasted in futile attempts to check cough by nauseating expectorants, or to bolster a failing nutrition merely by the administration of cod liver oil.

From the modern standpoint, the development of tuberculosis in any individual presents two factors: the specific germ and the favorable soil. Both must be present for the production of the disease. Ever since the important role played by the bacillus in the development of tuberculosis was recognised, attempts have been made either to destroy or inhibit the activity of the micro-organism by the internal administration of antiseptic drugs. Of such it may be said that thus far we know of none which can have any systemic action on the bacillus. Unquestionably, some drugs have a very effective local action, and when they can be applied directly to a tuberculous lesion excellent results may be obtained. We have, however, at present no drug which can be shown to have any specific constitutional action in pulmonary tuberculosis, nor is it at all likely that any such will be discovered in the future.

Attempts to modify the blood and tissues in such a way as to render them an unfavorable soil for the growth of the bacillus present a greater prospect of success. Such modification has been attempted along two diverse lines; the direct or specific, and the indirect or general hygienic method.

In the direct or specific method, attempts have been made to secure an immunity to the development of the bacillus, either by the employment of some antitoxin, which it was hoped might accomplish for tuberculosis what diphtheria antitoxin so successfully accomplishes for diphtheria; or, by the employment of the serum obtained from the blood of

an animal refractory to tuberculosis. These attempts must be regarded as having, so far proved unsatisfactory. The tuberculins introduced by Koch, in the hope that they might prove antitoxins, are now generally regarded as lacking specific action: owing, apparently to the fact that in tuberculosis no such immunity is induced at any stage of the disease. Tuberculin cannot, therefore, confer specific immunity to tuberculosis; on the contrary, there appears to be the objection to its use, that it may distinctly irritate the tissues. Carefully employed, however, in selected cases, tuberculin appears to have in some instances effected a cure. This result, according to Whitaker, appears to have taken place not through any action of the agent upon the bacillus itself, but by an increase of inflammatory action in the tubercle, whereby the death of the bacillus was effected. Aside from the possibility that the irritation thus artificially induced may sometimes be excessive and thus defeat its end, it has been noticed by good observers that the agent has no therapeutic action on recent miliary tuberculosis, and is not capable of checking the spread of this process.

Other experimenters have employed the serum obtained from the blood of animals supposed to be refractory to tuberculosis. Among the more prominent of these experimenters is Maragliano, of Genoa, who reports the results obtained clinically from the injection of serum derived from dogs, asses, and horses treated with the toxins of tuberculosis. Paquin, of St Louis, claims good results from the use of the serum obtained from the horse. Stubbert, at the Loomis Sanatorium, claims distinct therapeutic powers for an anti-tubercle serum prepared at the biochemical laboratory of the United States Government. One can only say that, as yet, equally successful results have not been obtained by other impartial observers.

In a paper recently published in the *American Journal of the Medical Sciences*, Dr. Trudeau and Dr. Baldwin sum up the results of four years of experimental work in their laboratory, testing the anti-toxic power of serums in tuberculin poisoning as manifested in sound and in tuberculous animals. They state that with a full appreciation of the uncertainty of correct conclusions from tests of the serums other than their own product which were tried with tuberculin, only one indicated anti-toxic power; this was obtained from a horse inoculated with non-virulent cultures. The apparent protection against fatal tuberculin poisoning occasionally seen, cannot be regarded as necessarily due to the specific anti-toxic powers of the serums, for similar effects were obtained occasionally from physiological salt solution. None of the serums appeared to prevent local or general reaction from small doses of tuberculin, nor to influence the temperature of tuberculous animals. Disappointing as these results may seem, the writers feel that in the light of recent contributions to our knowledge of the mechanism of immunity,

and anti-toxin production in the body, the outlook for an efficient tuberculosis anti-toxin is by no means a hopeless one.

Although failure has thus far attended our attempts by the direct specific method to immunise the tissues and render them an unfavorable soil for the development of the bacilli, comparatively satisfactory results have followed persevering, well directed efforts at strengthening the inherent resisting powers of the patient, by careful hygienic measures, a full dietary, and more or less complete rest. Thus, after the lapse of 2,000 years have we come back to the doctrines of Hippocrates and Galen, who taught that regimen and hygiene are the great curative agents. This plan, as perfected by Deitweiler, may be thus enunciated:—

1. A life, as much as possible spent in the open air and sunlight.
2. A full dietary, consisting of easily digested and nourishing food rich in carbo-hydrates and fats.
3. Rest, or moderate exercise short of producing breathlessness or fatigue, according to the condition of the patient, and the activity of the disease.
4. Such an amount of hydrotherapy as may be deemed advisable by the attending physician.

Supplementary to these

(a) Such general medication as may be of service in furthering these measures.

(b) Such symptomatic treatment as may serve to remove any offending symptom seriously interfering with the carrying out of the plan.

The value of the open air treatment of tuberculosis is no longer a matter upon which any disagreement among the profession can be said to exist. It may, at first, be difficult to convince the patient and his friends of the importance of living constantly out in the open air, not merely on one or two hours on pleasant days, but for the greater part of every day; eight hours at least out of the twenty-four are to be spent in the open, whether the sun shine, or the weather be cloudy; whether it is warm or cold. Stormy weather, with high winds, is alone excepted. At night the windows are always to be open in the sleeping room. Patients who may have been accustomed to over-heated and poorly ventilated rooms may not be able, at the onset, to stand this treatment for the whole day, but they should aim at accomplishing the hardening to it, as rapidly as possible. Sun parlors, such as are provided in many health resorts, are, in this plan of treatment, regarded with disfavour. Protection only from strong winds and rain is considered desirable. In pavilions or verandahs protected only on the side from which the wind blows, the patients should sit on easy chairs, or, if weakly, should recline on a sofa. In cold weather the feet must be kept warm by a hot water tin, or a stone, and rugs or furs should be used freely.

Much has been written on the relative therapeutic value of various climates and different altitudes. While it may be stated that the profession is generally agreed that a pure dry air with a minimum of cloudy or stormy days, and comparative freedom from high winds, offers the most desirable conditions for the treatment of pulmonary tuberculosis, Leyden, of Berlin, and Osler, in Baltimore, both consider that to guard against relapse, and for the future well-being of the patient, it is better that treatment be conducted at an altitude not very different from that to which the patient has been accustomed. Many physicians, however, believe that an elevation of from 3,000 to 5,000 feet, in incipient cases, with little or no pyrexia, nervous erythsm, or cardiac disease, *ceteris paribus*, is of distinct advantage; and I have in no instance noted any especial tendency to relapse, or to suffer at a later date from other pulmonary or cardiac disorder in those who have been cured at this altitude. It is, however, a point to emphasised that a special climate is not an essential in the successful treatment of the disease, although it is important to have, as far as practicable, freedom from dust and smoke, protection from sharp winds, and a large number of sunny days. Many of the climates which have acquired a reputation for the treatment of phthisis are by no means to be commended. Foreign or strange surroundings often discount climatic advantages, and home treatment methodically carried out is in some instances the preferable plan. Even in towns and cities the air in open spaces, on elevated galleries, or even in the streets, is much purer than that within houses; and for those who can do no better, even such an air utilised to the fullest extent will produce results which may not compare unfavorably with those of many health resorts.

In all cases where we have to deal with febrile conditions, this life in the open air must, at the outset, be one of complete rest; for such the recumbent or semi-recumbent posture is preferable, especially in cold weather. As the patient becomes habituated to the treatment, considerable variations in the temperature or in the character of the weather may be disregarded. At the various sanatoria the treatment is carried out summer and winter, in rain and in snow. The results obtained by this treatment, when rigorously carried out, are very striking. A gradual reduction takes place in the amount of fever; the appetite improves; body weight increases; sleep becomes sound and refreshing; and night sweats to a great extent pass away. At the same time, physical examination reveals a distinct improvement in the pulmonary condition. While in all cases in which any indications of activity in the disease show themselves, life out of doors must be principally one of rest, afebrile cases may be benefited by moderate exercise, depending largely upon the general strength, the amount of lung involvement, and the condition of the heart. In no case, however, should exercise be carried to

the point of exhaustion or to the production of either dyspnoea or much perspiration. In incipient and afebrile cases, breathing exercises methodically performed have, I think, considerable value. In these breathing exercises inspiration should be as deep as possible, with shoulders well thrown back, while expiration should be slow and prolonged. Even after the disease appears completely arrested, it is desirable that the patient should remain a considerable time under the influence of those conditions by the aid of which health has been restored. "Nothing ever gets quite well," was a favorite aphorism of the late Sir George Humphrey; and tuberculous patients should bear it in mind.

Sir Douglas Powell has recently laid stress upon the fact that life in a sanitarium is, to a considerable extent, educational in its value; treatment of the disease must be extended far beyond the few months' residence in an institution, and a successful issue is only attained by the steadfast application of the lessons that have been learned under the eye of the physician. As far as may be practicable a return to the ordinary duties of life under conditions similar to those which existed when the disease commenced should be avoided.

On the subject of the diet of these patients, it is only necessary to emphasise the importance of the maintenance of nutrition as a factor in the treatment; tuberculous patients with active disease require a much larger quantity of food than those in health, to compensate for the increased waste of tissue; and if digestion is unimpaired, they can usually assimilate well this increased amount. The food as supplied at ordinary meal hours should be plain, well cooked, and nourishing, but at the same time savoury, and varied in character. In addition to the ordinary meals it is often desirable to furnish these patients with some liquid easily digested food between meal hours; a cup of hot coffee or tea containing a large proportion of milk in it, given the first thing in the morning shortly after awaking, relieves cough, assists expectoration, and at the same time counteracts the feeling of exhaustion which often follows the morning spell of coughing and distinctly interferes with the enjoyment of breakfast. At 11 a.m. a tumblerful of milk or beef tea is frequently able to be taken with benefit; and again at bedtime, a cup of some nourishing but easily digested farinaceous food taken warm, relieves the irritating cough, and tends to induce sleep. As an interne at Brompton Consumption Hospital, I had frequent occasion to note the marked improvement in appetite and nutrition which followed the employment of simple stomachic remedies, such as a mixture containing sodium bicarbonate with a simple bitter, or nitrohydrochloric acid with nux vomica. I am not surprised, therefore, to note that Kingston, in a recent article in the *Practitioner*, and Fowler,

in his late work on Diseases of the Lungs, both emphasise the value of such simple medication.

Alcohol in general is of value only so far as it favors the digestion and assimilation of food. In patients who rapidly increase in weight and show any tendency to increase of pulse tension it may favor hemoptysis and is therefore to be avoided. Cod liver oil is our most rapidly absorbed and most easily assimilated fat; it is, therefore, a food as well as a medicine of acknowledged therapeutic value. The majority of tuberculous patients take cod liver oil with advantage, and many authorities acknowledge that a patient will gain weight while taking cod liver oil, although he fails to do so under other medicines. Should it impair appetite, give rise to acid eructations, or increase diarrhœa, it should at once be discontinued. Hydrotherapeutic measures are among the most valuable adjuvants in the treatment of the disease. Cold compresses are extremely serviceable for the relief of many of the minor ailments of tuberculous patients; while the cold sponge or douche, taken in regular methodical way, is of great value in toning the vasomotor system, and preventing the tendency to "catch cold" easily, so notable in many tuberculous patients. The best chest protector, says Ransome, consists in well douching the chest night and morning with quite cold salt water.

In regard to special medication, there is no occasion to repeat what must to all of you be well known facts. In my opinion, every accessory means of improving general nutrition should be taken advantage of, while all nauseating or depressing drugs should either be altogether avoided, or used in the most sparing quantities. Strychnine, as a stomachic and general cardiac and respiratory stimulant will, in many cases prove of great service. Creosote in moderate doses is occasionally of much service in checking fermentation in the alimentary tract; it also appears to be of decided benefit in cases associated with much bronchial irritation or secretion. Stubbert has employed ichthyol in keratin coated pills, with much success, especially in patients suffering from intestinal complications. He states that in a number of patients treated with ichthyol in daily doses of from 6 grs. to 10 grs., the results on weight, expectoration, cough, and the disappearance of bacilli were ten per cent. better than those obtained from the employment of creosote or any of its derivatives. My own experience with the drug has been too slight to draw any conclusions.

THE RESULTS OF SANATORIA AND SPECIAL HOSPITAL TREATMENT IN PULMONARY TUBERCULOSIS.*

BY

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A number of interesting questions arises in discussing the results of hospital and sanatorium treatment in pulmonary tuberculosis. Comparisons can be made between the results of treatment in sanatoria and hospitals for tuberculosis, but statistics are so notoriously uncertain that only an approximate opinion can be obtained from the figures available. This is due to the fact that the various modes of classifying cases as regards their stage of disease are so different. One must also remember that sanatoria take mostly incipient cases, whereas hospitals take cases in all stages. For example, at the Royal National Hospital, at Ventnor, there have been treated since 1870 nearly 17,000 cases. ("Prevention of Consumption." By Dr. J. G. Sinclair Coghill, *Nineteenth Century*, Feb. 1899,) and of these hardly one per cent. of the cases admitted were in the first stage, whereas at Gœrbersdorf, they amounted to 27.62 per cent. Moreover, patients received at a hospital are in a much different physical condition than those received at a sanatorium, since, up to almost the present time, sanatoria have treated patients who are well-to-do, whereas hospitals have treated the ill-nourished poor.

In Knopf's thesis on "Les Sanatoria: Traitement et Prophylaxie de la Phthisie Pulmonaire," read before the Faculty of Medicine of Paris in 1895, there is a table of results which I, in part, copy. I also take the liberty of copying a table of results from E. L. Trudeau's article on "The Adirondack Cottage Sanitarium for the Treatment of Incipient Pulmonary Tuberculosis," which appeared in the *Practitioner* for February, 1899.. (See table.) I wish for a little to dwell on these tables, further on I shall discuss the terms "cured," "apparently cured," "disease arrested," and "improved."

In the second table it is seen that of the incipient cases that remained an average of nine months at the Adirondack Cottage Sanitarium, 73 1-3 per cent. were "apparently cured," while 34.48 per cent. of all the cases that remained an average of nine months were "apparently cured." In the first table, 26.38 per cent. is given. This has to do with the total number of patients that were admitted to the sanatorium in the year 1898.

* Read before the Montreal Medico-Chirurgical Society, April 17, 1899.

I desire to mention the excellent results at the Sanatorium de Turban at Davos, where 40 per cent. of the cases were cured and 40 per cent. improved. The above results are extraordinarily favorable, if one keeps in mind the virulence of the disease, which only 40 years ago was considered incurable. The results at the Royal National Hospital, Ventnor, are also remarkably good when one considers that hardly one per cent. of the cases admitted were in the first stage of the disease; 17.14 per cent. of all the cases were cured, and 61.11 per cent. improved. Allow me to emphasize these excellent results. By referring to the first table you will see that they are as good as those obtained at Liberty and better than those obtained at Gravenhurst. Ventnor is a practical proof of what can be done by hospital treatment of tuberculosis. It differs essentially from the other English hospitals in advantages of climate, locality, and the structural arrangements, having been originally designed for the purpose of obtaining the utmost possible exposure to open air and sunshine, as a fundamental principle in the treatment. I feel confident that equally good results can be obtained from consumptive hospitals situated outside the limits of our Canadian cities, provided the hygienic-dietetic treatment be employed.

As you are doubtless aware, consumptive hospitals for the poor have existed for a long time in England. Among them are Brompton, founded in 1841, with 321 beds; Victoria Park, in 1848, with 164 beds; North London, in 1860, with 75 beds; The City Road Hospital, in 1873, with 75 beds; and the Royal National Hospital, Ventnor, with 138 beds. It is worthy of mention that to them is very largely due the remarkable decrease in deaths from phthisis which has taken place in England since a date corresponding to their establishment. Roughly speaking, the deaths from phthisis in England have decreased by one-half since the seventies. This fact is often mentioned by continental authors as being an indirect result of consumptive hospitals.

Allow me to carry this idea of establishing consumptive hospitals for the poor a little further. If, in addition to the hospitals situated outside the city limits, we could establish sanatoria in suitable climatic localities not too far removed from the centres of population, I see no reason why results should not be obtained similar to those of the most famous continental sanatoria.

Roughly speaking, the number of cures from almost all sanatoria is estimated at one-third the number of those treated, provided they remain a reasonable time, say from three to nine months. I do not think I go too far when I express the hope that the number of cures will be much larger if patients undergo methodical treatment while they are in the incipient stage of the disease, and that almost every person under the foregoing supposition has the prospect of cure.

In examining the results of treatment at the different sanatoria, one is struck by the difference in the terms used. For instance, Dettweiler and his pupils use the term "absolutely cured," "relatively cured," "disease arrested," and "improved." In fact, the different phthisio-therapeutists nearly all employ different terms. Almost all agree that absolute cures do occur. Observations of spontaneous cures have been gathered and published by clinicians of all countries, and I am sure there is hardly a practicing physician who has not seen a spontaneous cure. The largest number of cures has been observed in sanatoria. In his communication to the Congress of Buda-Pesth in 1894, Dettweiler made the statement that "the treatment in sanatoria is to that of people treated in a loose manner, as for instance in boarding houses, as the treatment of our hospitals is to that of our out-door consultations." Enumerations of results would have scientific value if the observations which have verified the cure were made under identical conditions. The various observers have not interpreted in the same way the objective signs furnished by observation, auscultation, and bacteriology. Knopf says that the discussions he had with the most distinguished phthisio-therapeutists showed him that the conception of cure was interpreted differently by almost all. Darenberg, quoted in the treatise on medicine by Marfan, who adopts his ideas, says, "one can pronounce cured an old phthisical, who, during ten years, has resumed his occupations without having an hæmoptysis, an excess of fever due to an actual tuberculosis, or an expectoration containing tubercle bacilli. If, during ten years, he has been resistant to those bacilli lost in a corner of his lung and probably dead (for we have seen that dead bacilli are also irritative), there is no cause why he should again become phthisical, if he does not again place himself under the conditions in which he suffered his first attack. One must not forget that the tubercle bacillus is incapable of infecting all the tissues; that man is a being relatively refractory to tuberculous infection; that it is important to consider the virulence as the expression of the diverse modifications of the life of the microbe, which is being constantly influenced by the essentially changeable physico-chemical qualities of organic media. The physician recognizes that the tubercle bacillus thrives only on soils which are favourable to it; that one microbe is not sufficient to cause tuberculosis, and that as regards various diseases some at least of those affected by those diseases appear to accumulate morbid material in their tissues as a consequence either of hereditary or of acquired disposition." Dettweiler distinguishes the "absolute cure," and the "relative cure." He defines "absolute cure" as the re-establishment of normal functions in all the organs and the complete disappearance of bacilli from the sputum. A "relative cure" exists if the patient recovers his well-being, if the organs

function well, despite some fits of cough and some morning expectoration. His pupils, Meissen, of Hohenhonnef, and Turban, of Davos, make the same distinctions as their master.

Trudeau uses the terms "apparently cured," "arrested," and "improved." "Apparently cured" are those cases in which the rational signs of phthisis and the bacilli in the expectoration have been absent for at least three months, or who have no expectoration at all, any abnormal physical signs remaining being interpreted as indicative of a healed lesion. "Arrested" are those cases in which cough, expectoration, and bacilli are still present, but in which all constitutional disturbance has disappeared for several months, the physical signs being interpreted as indicative of a retrogressive or arrested process.

Sabourin, of Canigou, divides his patients into "curables," "improved," and "incurables." He does not use the word "cure" unless the cough and expectoration (expectoration without cough) have entirely disappeared.

Weicker, of Görbersdorf, considers "cure," taken in the sense of "*restitutio ad integrum*," as a miracle. He divides his curative results into,—(1) improvement recognized as such by the invalid himself, (2) improvement permitting the invalid to resume his occupation, whether manual or intellectual work, (3) simple improvement by the sojourn at the sanatorium.

Wolff, of Reiboldgrün, agrees with Weicker, but recognises that improvement is able to be so remarkable as to permit of many invalids resuming their occupations and reaching a very advanced age.

I have given the views of some of the leading phthisio-therapeutists concerning the terms "cured," "arrested," and "improved," let me now for a little discuss the term "cured" in a general way. Some says that tuberculosis is never cured, that in the cicatrix or fibrous tubercle the trouble is dormant and can be lighted up. But, it is well known that tuberculosis is able to reappear in a lung with cicatrices without any of the old centres being lighted up. The experiments of Kurbow have proved the frequent sterility of old fibrous or cartaceous centres, and Herman Weber saw a patient die from typhoid fever who had twice recovered from pulmonary tuberculosis. It is reasonable and, I think, sufficient to admit that a lung, which has formerly had tuberculosis, should have acquired a special predisposition and have become a *locus minoris resistentiæ*. This may be accounted for by the insufficient activity of the lung tissue, or from some other cause. The intestine after typhoid fever is strewn with the cicatrices of Peyer's patches, the lung has fibrous nodules after the cicatrization of tubercles. Can we say that neither the one nor the other is cured, or that both have returned to an absolutely physiological condition? No one, to-day,

ventures to say that typhoid fever is incurable, and why should one contest the cure of tuberculosis? The experiments mentioned by Adami in the *MONTREAL MEDICAL JOURNAL* are perhaps the most convincing proofs that tuberculosis is absolutely curable. Virulent tubercle bacilli were injected into the peritoneal cavity of dogs. Some weeks later, on opening the abdomen, the peritoneum was found to be studded with miliary tubercles. The cavity was then closed and some weeks later again opened. It was then found that the tubercles had absolutely disappeared.

One is liable to ask:—Are these “cures” mentioned in the tables of statistics of a permanent character? In 1886, Dettweiler published a report of 702 cases completely cured of a duration of three to nine years. In the *Practitioner* for Feb., 1899, Trudeau gives the number of patients who received injections of Koch’s tuberculin. These patients were distributed over a period of seven years, and on their departure from the sanatorium were all classed as “apparently cured.” Some have not been traced, but of those that have, 67 per cent. are at present well and have not had a relapse.

From the facts I am about to mention, I am sure you will agree with me that it is the imperative duty of the large cities and of the state to establish both consumptive hospitals and consumptive sanatoria for the poor. I wish first to call your attention to what Ransome says in his Milroy lectures on the Etiology and Prevention of Phthisis, published in the *London Lancet* of March 8, 1890.

“Tuberculosis at the present day carries off annually nearly 70,000 persons in England at the ages of between 15 and 45,—the most useful stage of human existence. It kills more than one-third of the people who die, and nearly one-half between 15 and 35; moreover, in its prolonged and painful course, it either prevents its victims from earning a livelihood, or, at least, interferes greatly with their daily work. The habit of seizing upon the flower of the population; its slow but almost certain progress towards death; the utter misery of the last few months or weeks of existence; all these are features in the fell disorder that renders its study all important, not only to medical men but also to statesmen and to all who are concerned in the welfare of the nation.” The question of the loss to the state from the large number of deaths from pulmonary tuberculosis has not received the consideration at the hands of physicians and political economists which it should. The labor of every producer has a certain average value annually to the state. Estimates of this value vary from \$780.00 to \$2,000.00. Chadwick considers an English laborer equivalent to a permanent deposit of \$980.00. Farr gives \$780.00 as the average value

of each human life in England. In the Province of Quebec there are upwards of 3,000 persons who die of tuberculous disease annually, and, taking \$800.00 as the average value of each producer, we see that the province sustains an annual loss of \$2,400,000.00. In 1897 there were 497 deaths from pulmonary tuberculosis in the City of Montreal between the ages of 15 and 60, a loss to the city for that year of \$397,600.00. I am sorry to say that the annual report of the Board of Health states that, instead of decreasing, consumption goes on increasing from year to year.

I have endeavored to show that tuberculosis is a curable disease and that the state loses every year an enormous amount of money by not treating its poor in special consumptive sanatoria and hospitals. Treated in sanatoria, we should expect at least one-third of the cases to be cured, and just as many improved. The question now arises:—How can we accomplish the task of giving to the consumptive poor the benefits of the fresh air treatment? Knopf is of the opinion that every town and city should have a hospital for its consumptive poor. (1) That the hospital should be situated outside the city limits, in a site as favourable as possible, and should receive patients in all stages of the disease. (2) That sanatoria should be established within easy reach of the city, where chosen cases should be sent which have the most need of changes of air.

Von Leyden insists that in order to make sanatoria really beneficial, very sick tuberculous patients must be excluded, and only those admitted who have a decided prospect of cure or of considerable improvement. This is due to the fact that sanatoria have methods of treatment which are not suitable to bed-ridden patients.

Almost all physicians who have seriously considered the question of providing for the consumptive poor agree that advanced cases should have access to special hospitals near or in cities where they can be cared for. This is advisable on humanitarian grounds and also to limit infection, as such patients are often a serious danger to those about them if their secretions are not properly disposed of. They should be treated so far as possible according to those rules observed in the hygienic-dietetic treatment. Incipient cases, and advanced cases with a chance of recovery, should be sent to good climates, to sanatoria constructed for this purpose, and made to lead a regular life according to rule and under medical supervision.

In conclusion, I wish to consider for a little some points in the treatment of tuberculosis. Former speakers have already dealt with this part of the discussion, so I will dwell only on a few points.

There exist several methods of treating tuberculosis. The specific method aims at producing direct healing, and is directed against the

disease itself and its cause. To it belong medicinal and etiological therapy. The second method is called the "hygienic-dietetic," or "hardening" treatment, and seeks to strengthen the organism in order to make it capable of overcoming the disease.

With regard to the specific method, it is interesting to examine into the views of some of the leading workers on tuberculosis. Böhning thinks that years must still pass before a serviceable tuberculosis serum will be obtained. Von Leyden says that so far as can be seen, the tuberculines which are being sought after, if they are found, will always give only an acceptable aid to the prevailing treatment for tuberculosis. Trudeau is of much the same opinion as von Leyden, and his views are particularly interesting at the present time. I may say that I give the following views with his entire approval.

He is hopeful that a tuberculin may yet be found, which, when applied to incipient cases, will enable the patient to acquire a certain degree of artificial immunity by stimulating his cells to an increased resistance or making them less susceptible to the toxic products of the disease. He also hopes that a more powerful tuberculous toxin may be obtained by laboratory methods, which, when applied to susceptible animals, will result in the production of an anti-toxic serum of sufficient potency to be of real service in the treatment of the more acute cases to which tuberculin injections are harmful rather than beneficial, because they are already overwhelmed with a poisonous product of the malady. But, as yet, there is no scientific evidence that an efficient antitoxic serum for tuberculosis has been produced. He thinks any encouraging results that may have been obtained in his hands at the sanatorium by the tuberculin treatment, have been dependant on the fact that the nutrition of the patient was kept at the highest standard throughout the treatment, and the doses increased so gradually that the system was never called upon to antagonise by any anti-body more of the toxin than it was able to cope with. Patients treated by this method at the sanatorium who have been discharged as apparently cured have seemed to suffer from relapses less frequently than those who have recovered under climatic and open-air treatment alone, but he calls attention to the fact that, unfortunately, it is impossible to determine whether this apparent immunity to relapse is the direct result of the tuberculin treatment, or whether the tolerance to large doses of this toxin shown by these patients indicates that from the first their tuberculosis was of a subacute or benign type.

We should not, however, calculate too much with probabilities. Practical medicine has to attend to the present and we cannot console our patients by holding out hopes to an uncertain future. We must treat them according to those methods which we recognise as the best, which are proved so by the greatest number of cures; that is, we should

treat them by the hygienic-dietetic treatment in separate sanatoria. The essentials of this method of treatment are:—

- (1) An appropriate climate.
- (2) Fresh air,—which comprises, (a) the being out of doors all day, (b) sleeping with open windows, (c) going out in all weathers.
- (3) Abundant nourishment.
- (4) Hardening.
- (5) Bodily exercise and rest.
- (6) Methodical carrying out of the treatment.
- (7) Appropriate medicines, which aid the rest of the treatment.

Though one cannot assign a specific action to any air, it is an important hygienic means, and by its stimulating action is capable of influencing the general tone of the organism and its resisting power. The hardening measures depend on the continuous use of fresh air, so that patients become accustomed to it and do not go indoors for fear of any weather. Employed in such a way, the free and courageous use of fresh air is of great importance. One naturally desires an air which shall be health-producing. It should be as pure as possible, i.e., free from dust and vapor. It should stimulate. Hardening treatment has obtained great recognition with other diseases besides pulmonary tuberculosis and is opposed to the effeminacy which one so often finds associated with invalids, and which is favoured by the love of the family and partly by the physician. It is a very powerful means which very materially assists to overcome the disease and prevent its relapse. It consists in the free employment of air without, or with lessened, fear of catching cold. I would like to mention here that there has been only one case of pneumonia at the Adirondack Cottage Sanitarium since it opened.

The principle aim of the modern sanatorium treatment of tuberculosis is to improve the patient's condition and increase his resistance to disease by placing him under the most favourable environment possible. The invigorating influence of a life spent constantly out-of-doors for many months, can hardly be overrated. With regard to exercise, Trudeau says:—"It is much better always to err on the side of over caution in prescribing active exercise to tuberculous patients, and I feel confident that many lives are constantly sacrificed to a deep-rooted and very general misconception which exists in the lay, and to a great extent in the professional, mind as well, in regard to the advantages of active exercise in this disease. If there is any one rule which should be generally applied to the treatment of tuberculosis, it is, that when any degree of fever is present, the course of the disease will be injuriously affected in direct proportion to the amount of active exercise the patient is allowed to take. Still further, I often see an apparently quiescent and arrested process

“fanned into renewed and often uncontrollable activity by one single over-exertion. This position in regard to exercise may seem rather an ultra one, but it has been amply sustained by abundant and unfortunate experience in this direction. What is but moderate exercise for a man in health means over-exertion and exhaustion to the phthisical invalid. To see a man with a daily afternoon temperature of 101°—102°F., and a pulse above one hundred, trying to gain strength by rowing a boat, riding a bicycle, or attempting to climb a mountain, as he is often advised to do, and to note the baneful effect of this course on his disease, will prove more convincing than any form of argument. Absolute rest, so long as it is taken in the open air, is the best measure at our command to reduce the pyrexia of tuberculosis and to conserve the patient's energies, and should be persisted in for some time after the afternoon fever has ceased to be present, moderate exercise being again allowed only with caution.”

TABLE I.
STATISTICS OF NINE SANATORIA FOR THE TREATMENT OF PULMONARY TUBERCULOSIS.

NAME OF SANATORIUM.	DIRECTOR.	MORTALITY.	CURED.	DISEASE ARRESTED.	IMPROVED.	UNIMPROVED.
Adirondack Cottage Sanitarium	Dr. Trudeau	4.16 per cent.	26.38 per cent.	30.55 per cent.	27.08 per cent.	9.72 per cent.
Loomis Sanatorium at Liberty	Dr. Stubbart	17	"	7	42	"
Gravenhurst Sanatorium	Dr. J. H. Elliott	14.45	"	27.7	34.93	"
Winyah Sanatorium	Dr. Von Ruck	43.4	"			
Falkenstein Sanatorium	Dr. Detweiler	4-4½ per cent.	(absolute) 14 per cent. (relative) 14 per cent.		45	"
Brehmer Sanatorium at Garbersdorf	Dr. Achtermann	7.5	"	25	50	"
Sanatorium de Turban at Davos	Dr. Turban	4.36	"	40	40	"
Royal National Hospital	Dr. J. G. Sinclair Coghill	3.95	"	17.14	61.11	17.76 per cent.
Nordrach Sanatorium	Dr. Walther	30	"		65	"

TABLE II.

TWO HUNDRED AND THREE PATIENTS WHO REMAINED IN THE ADIRONDACK COTTAGE SANITORIUM AN AVERAGE TIME OF NINE MONTHS.

CONDITIONS OF THE PATIENTS WHEN ADMITTED.	APPARENTLY CURED.	DISEASE ARRESTED.	IMPROVED.	UNIMPROVED OR FAILED.	DIED.
75 ineipient cases	55-73½ p.c.	16	2	2	0
84 advanced cases	15	38	19	11	1
44 far advanced cases	0	7	19	13	5
203	70 (34.48 p.c.)	61	40	26	6

AN INTERESTING CASE OF STRANGULATED MECKEL'S DIVERTICULUM.

BY

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M. H., a boy of 13 years of age, was sent to the Montreal General Hospital on December 10th, 1898, for operation, a diagnosis of strangulated inguinal hernia having been made by the physician attending him previous to admission.

History of the Present Illness. The patient was in excellent health until December 2nd, eight days before, when, on his way to school in the morning, he was suddenly seized with a severe pain in the abdomen, so severe that he was forced to return home feeling very weak and sick at his stomach. Rest in bed gave him some relief and his condition appeared to improve somewhat during the following night. A purgative was administered and the following day his bowels moved slightly. During this time and up to the fourth day of the attack (four days before admission to the hospital), the pain was chiefly confined to the lower right quadrant of the abdomen, and during this same period his bowels moved in all three times, the character of the stools being somewhat constipated. For the last four days there had been no motion. Vomiting was present from the second day on and the morning of admission was noticed to be of a dark brown colour. Four days ago the pain became more general, and along with this change the surface of a small mass in the inguinal canal became inflamed and very tender.

Present Condition. The patient is a poorly nourished youth of 13 years of age, very restless, but not at all delirious. The face is flushed, the malar arches prominent, the eyes sunken, lids partly closed, expression anxious, lips covered with sordes, tongue dry and covered with a dark brown deposit, and the breath foul. The temperature is 101 1-5° F., pulse 86, respirations 20. He prefers to lie in the dorsal position with the thighs flexed on the abdomen.

Abdomen. The superficial veins of the abdomen are prominent. There is a marked distention and rigidity of the abdominal muscles. In the right inguinal canal there is a mass about the size of a walnut, the surface of which is inflamed. Tenderness is present all over the abdomen, but especially over this mass. The percussion note is low-pitched tympany (tympanities) except over the mass described, which is dull. The liver dulness is completely obliterated.

Examination of the scrotum shows absence of the right testicle and the mass felt was thought to be the undescended testicle in the inguinal canal.

Operation. The patient was anaesthetised with ether and an incision made over the mass in the course of the inguinal canal. The subcutaneous tissue was found hyperaemic and the bleeding points were secured. The aponeurosis of the external oblique and the internal oblique muscles were then divided. The tumour was found to consist of an inflamed mass about the size of a walnut, firm to the touch, and adherent to the surrounding tissues. It was impossible to dissect out the spermatic cord on account of the adhesion, so the tissue was ligated

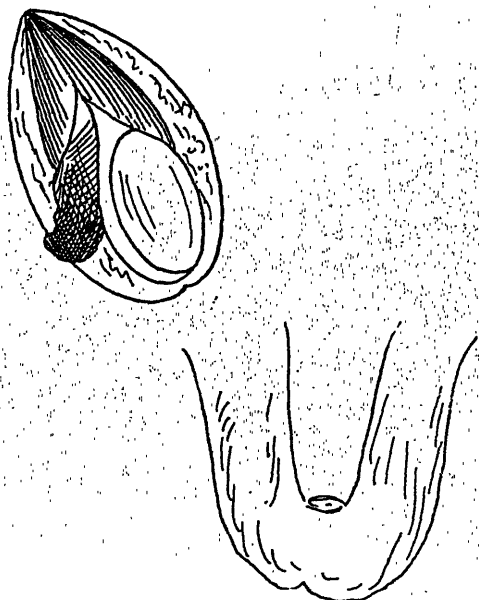


FIG. 1. Shows the strangulated gut lying behind an undescended testicle. Right half of scrotum empty.

above, *en masse*, and the testicle removed. Portions of gangrenous tissue, some of which presented the appearance of having a covering of peritoneum, were found adherent to the walls of the canal. The bowel was found to be completely sloughed across and only about a half inch of gut could be secured and but one lumen made out. For further exploration, a few fibres of the transversalis muscle were snipped with scissors, and on then pulling out the portion of bowel a little more, it was found to join the intestine at right angles and to allow a probe, introduced through it, to be passed up and down the course of the bowel. (See the drawing.) The condition was diagnosed as a strangulated Meckel's diverticulum under an undescended testicle. The gan-

grenous ragged edge of the diverticulum was removed and the edge was then invaginated by a double row of Lembert sutures (silk). The parts were swabbed with carbolic solution 1 to 20, followed by a 1 to 40 solution, and the intestine returned to the abdominal cavity. A considerable quantity of pus was found in pelvis and lower abdomen. A drainage tube and iodoform gauze were inserted, the divided portion of the transversalis was sutured, and the internal abdominal ring and the inguinal canal obliterated by suturing the conjoined tendon to Poupart's ligament with an interrupted cat-gut suture. The external oblique was sutured with a continuous cat-gut suture and the skin incision closed with silk-worm gut. As each layer of the abdominal wall was sutured the parts were swabbed with 1 to 40 carbolic solution. The wound was then dressed with boracic acid and dry dressings, and a pad of absorbent cotton affixed by adhesive plaster.

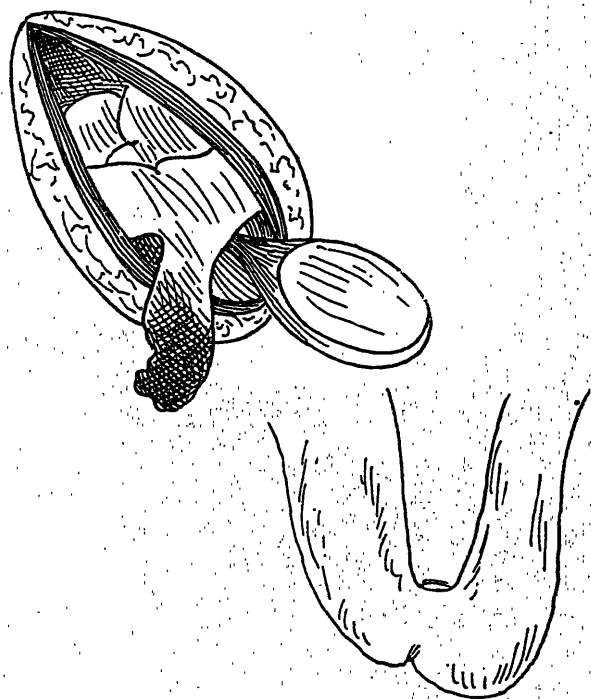


FIG. II. Shows the strangulated gut, freed and drawn down, to be a Meckel's diverticulum.

After-Treatment. The patient came out of ether quietly, with no vomiting. Champagne \mathfrak{z} ss., and strychnine gr. $1/60$, were given every four hours. At 2 a.m. a saline enema of one pint containing ten minims of tincture of digitalis was administered; the temperature was then 100°F .

At 6 a.m., a nutritive enema of peptonised milk $\bar{\zeta}$ ii, one egg, somatose $\bar{\zeta}$ i and brandy $\bar{\zeta}$ ss., was retained. At 8 a.m., the temperature was 102 4-5°F., the pulse 112, and the respirations 36. Vomiting came on again about 10 a.m. and was of a dark brown colour. A nutritive enema given at this time was only partly retained. A subcutaneous injection of normal saline was given at noon. Ice bags were applied to the abdomen from the time he came out of ether until he died at 2.15 p.m.

The wound was dressed at 10 a.m. and again at noon. A slight discharge of bloody pus was found in the dressings and drain, down which a strip of iodoform gauze was passed to act as a capillary drain.

Synopsis of the Pathological Report. Adhesion had taken place at the point of the invaginated intestine; the suture line was perfectly closed. There was present, acute purulent peritonitis, dilation of the stomach and upper intestine, chronic thickening of the ileum and mesentery in the neighbourhood of the diverticulum, chronic catarrhal gastritis, and right broncho-pneumonia.

By a reference to the diagram it is easily seen how the bowels could continue to act after the diverticulum had been strangulated. This fact probably explains the difficulty experienced in diagnosis and the long delay—eight days—in bringing the patient to the hospital.

JOINT INFECTION IN TYPHOID FEVER*

BY

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Of more than usual interest have been a few cases which have come under observation within the last year. These represent a condition concurrent with or a sequel in the convalescence from typhoid fever. Although the lesions due to typhoid are many, in this paper joint affections only, will be considered, being of special interest to the orthopædist, on account of the deformities accompanying them—the necessity of forestalling these when their liability to occurrence is shown by pain, swelling or some other feature drawing attention to the joint.—and of correcting and re-establishing their usefulness when the deformity of the joint has already occurred.

Although the typhoid bacillus, the bacillus of Eberth, has been found in the joint fluids in a few instances, it is not usually—besides, typhoid joints have been seldom examined post mortem and there are very few records of bacteriological examination,—and these have been either negative or reveal the presence of pyogenic organisms. Prof Keen recounts a number of interesting cases with regard to this point. Orloff injected cultures into joints of dogs and rabbits and reported that this was followed by swelling in twenty-four (24) hours, with hæmorrhage into the synovial membrane. A thick, tenacious, turbid fluid was produced in the joints which later became purulent. There were found no pus corpuscles, but, in the earlier days after the infection, typhoid bacilli. This may explain the impossibility of finding the bacilli in joint affections in man, at least in some cases;—"having done their malignant work they have disappeared." Though we are still ignorant of the bacteriology of joint effusions, from analogy we may conclude their primary invasion of the bacilli, then disappearance. "The irritation caused by the bacilli or their toxins will readily account for the slow, but steady accumulation of fluid in the joint." (Keen.)

When the pyogenic bacteria, staphylococci and streptococci, are present we have what is called mixed infection, and where abscesses result the typhoid bacillus is found more about the walls of the abscess cavity than in its contents. The fact of joint affections so often being found in or after typhoid at shorter or longer periods, is presumptive evidence that if not responsible directly for the joint inflammation, the typhoid bacillus is strongly contributory to it, in lowering the general resistance and allowing infection by other forms of bacteria to occur. This con-

* Read before the American Orthopædic Association.

dition may be induced by slight injuries, the use of the joint when in a weak condition predisposing a favorable state for the attack of the bacillus. Case three (3) shows the pain and joint trouble coming on five (5) days after rising from bed apparently recovered.

What is the nature of the joint trouble? We are familiar with the frequency of periostitis most commonly, and osteomyelitis in the bones following typhoid, but the exact nature of the joint affection is not well understood. Sometimes the joints are infected by an extension into them of the above-named conditions, still primary infection is the rule.

Prof. Keen, of Philadelphia, whose recent work, "Surgical Complications and Sequels to Typhoid Fever," embraces a chapter on Joints, has contributed the most complete and exhaustive treatise on the subject up to the present time. He also sums up the literature most comprehensively, and the clinical classification which he makes is a very satisfactory one. He speaks of typhoid arthritis proper, and, besides this form, rheumatic typhoid arthritis and septic typhoid arthritis.

The rheumatic variety is well illustrated by:—

CASE I, F.Q., æt. 12, M.G.H., exhibits multiple ankylosis, commencing late, one year, after an illness, possibly typhoid. As a child of seven she received a kick in the ankle, in the month of May, it was stiff a few days only; as late as August no sign of trouble, then joint began to swell; in two months knee of same side was involved, and contraction began to take place. Was put in plaster of Paris, remained some time, and when it was removed was said to be all right. Then some time afterwards, namely, four years ago, the other foot and knee gave trouble and both hips. She was put on an extension and kept straight on a wheeled carriage for a year and a half, then allowed to sit up. when spine, shoulders, elbows and wrists were found involved. She came under my charge in the Montreal General Hospital last spring, after being without treatment for some four months, during which time she was allowed to sit up in a chair, and from this bad position became much deformed, flexions of knees, hips, elbows, wrists, spine and neck, the ankles also. There is strong fibrous ankylosis in these positions and pain on attempted passive motion, but no osteophytic growth nor apparent eburnation of the joint surfaces can be made out. By Bilroth splints and traction in line of deformity on a frame, nearly all the deformity has been overcome, but ankylosis persists and forcible movement sets up fresh arthritis. We have used the hot air baths for some months up to 325°F., but stopped them as no appreciable benefit was observed. The patient is in good health otherwise.

Typhoid arthritis proper, illustrated by cases two (2) and three (3).— This variety may be either poly or mon-articular, the hip being the joint usually attacked in the latter instance, and being the most serious in its results. These cases are rarely fatal and recover with very little deficiency of the joint. Ankylosis is not usual, as a result. Faulty

positions persisted in for a long time after the fever disappeared accounted for the ankylosis in both hips in one of the cases quoted by Prof. Keen. This was removed by forcible flexion under ether, so that in a similar case early passive motion is indicated.

The non-articular form affects the large joints, the elbow, shoulder, ankle, knee, but especially the hip. (*Cases 2 and 3.*) Early pain and incapacity, swelling, heat, and redness, although the swelling may be concealed or masked by the large muscles about the hip, and by contractions. These contractions interest us most as we have to deal with the deformities, generally after the fever has disappeared some time. The condition here is one of synovitis with consecutive arthritis, but pus is infrequent and fistulous openings rare (Keen). In only one case out of forty-one given by Keen in his second table did suppuration occur, and that was in the knee. Dunin's case, also quoted, in which there were abscesses of the buttock and hip, many furuncles, and suppurative otitis media, with arthritis of the right elbow and shoulder, but these joints did not suppurate. In this class of cases useful joints generally result. (*Cases 2 and 3.*)

As to frequency in typhoid of these joint troubles; it is not great. In the literature of the last fifty years, Keen has collected in all eighty-four (84) cases involving the joints in which, he says, spontaneous dislocation occurred in forty-three (43). Forty (40) in the hip; twice (2) in the shoulder, and once (1) in the knee. So that fully one-half of all cases of typhoid arthritis were followed by spontaneous dislocation, nearly all of which were of the hip joint.

Dislocation is a most important feature in this form,—it is similar to that found in exanthematic arthritis, Charcot's joint, etc. The cause of dislocation is a subacute synovitis distending the capsule, which reinforced by the Y ligament anteriorly, gives way, or stretches posteriorly, then stretching of the ligaments from this same cause occurs, and filtering of the fluid between the articular surface. After the subsidence of the inflammation on account of the looseness of the capsule, and, perhaps, of the thickening of the gland at the bottom of the acetabulum, the muscles by contraction will dislocate the joint, or it may be turned out by any small force, as turning in bed. Iliac is the usual form, but two obturator dislocations have been reported. As to sex:—of thirty-five (35) cases, nineteen (19) were males and sixteen (16) females. Age, thirty-two (32) out of thirty-five (35) occurred before the twentieth (20th) year. There is a very marked analogy to coxalgia and diagnosis is important. The treatment of these cases is simple, if early, but late is sometimes very troublesome. In seventeen (17) cases reduced, thirteen (13) were by manipulation, two (2) by both. In eleven (11) cases reduction was not effected. If one finds pain in the joints in a case of typhoid one must use every precaution. Rest! Position in abduction and external rotation, sand bags and mild extension are recommended.

by Keen. If effusion is great aspirate strictly antiseptically. If pus is found open up and treat antiseptically. Sometimes necrosis is found.

The third class of case is that of mixed infection—due to infection by typhoid and pyogenic bacteria. This condition may be very serious, indeed. Infection may take place from bed sores (*Case 4*), boils, ulcers, and even typhoid ulcers themselves. It is usually poly-articular; the symptoms are those of acute suppurative arthritis, but more severe. Death may occur from septic absorption within a few days, or rigors and a succession of chills be experienced, high temperature 105° and 106° , bounding pulse soon becoming weak, tongue dry and brown—Sordes, delirium, and death from poisoning. This requires most vigorous treatment. Free incision and drainage to save the joint and life—and the earlier the better. If the synovial membrane is not all destroyed a certain degree of motion may be re-established. In mild cases, elevation, with cold and compression, light diet and bowels kept open, with rest is sufficient.

Differentiate this condition from other forms of joint trouble, such as simple arthritis, suppurative, pyæmic, puerperal, exanthematic, urethral, gouty, rheumatic, octeo-arthritis, tubercular arthritis, and senile tuberculosis. The flexions in these cases are due to reflex contraction of muscles due to joint irritation. The typhoid bacillus infections are usually late, the mixed early in convalescence.

CASE II. A. J., 19, student, taken ill with typhoid fever, Jan. 2nd, this year, delirium three weeks, then progressed favorably for a time when the high temperature recurred, of an intermittent type. He became convalescent and got up and about in two weeks, when he had to take to bed again with pain in the right hip joint and flexion of the thigh upon the abdomen. Rest in bed one week only, with the use of hot water bag brought about a subsidence of the pain and the contraction relaxed. Pain was referred to the right thigh and testis, although no inflammatory trouble existed in the latter organ. Is now up and about again (May 1st), but still has contraction of right hip joint—cannot be extended beyond 180° .

CASE III., J. de S., æt. 11. On Jan. 23rd, this year, was called in consultation to see a young girl who had typhoid fever, a mild attack, commencing October 3rd last autumn. She remained in bed two weeks, was then allowed up and after five days complained of a sore leg, returned to bed and then drawing up of the limbs took place—both lower extremities—this continued up to the time I saw her. She then lay in the recumbent position, hips and knees flexed, hips about 90° , knees about 45° , left adduction marked, with abduction of right thigh, apparent shortening of left thigh two inches, rather greater than the adduction should indicate. Tenderness in the region of the left hip was great

and not marked in the right hip or knees, which were rigid, but movable. She was very apprehensive. Chloroform was given to more fully examine the joint and it was moved about rather more than was necessary or advisable. Under the anæsthetic the limb could be fairly well moved through a limited range of motion, thigh flexed on abdomen and extended to 135° about, excluding any great degree of dislocation, although such presented itself to my mind, by the position and measurement of the limb. Nelaton's line was from $\frac{1}{2}$ to $\frac{3}{4}$ inches below the border of the great trochanter; but in the flexed position there might have been a slight error; however, dislocation was suspected, at this time. Another feature of this case was the presence of a muscle tumor or hæmatoma in the anterior femoral region, just below Scarpa's triangle. Typhoid joint was diagnosed, and treatment by extension in the lines of deformity advised. While preparing the Bradford frame, and upon return visit, the thighs were found drawn up upon the abdomen, and the left hip markedly tender and painful, due to the movement in examination, proving to myself joint affection as the cause, the increased flexion being due to muscular contraction consequent on the aggravated synovitis or arthritis.

Treatment was applied (aspiration was opposed by the parents), extension by weight and pulley was applied to both thighs in the line of deformity, by means of a scaffold over the bed, and elastic traction by rubber tubing and ankle boots, attached to end of the Bradford frame on which the patient was placed. The synovitis or arthritis subsided nicely and the contractions relaxed rapidly until on the 9th Feb., two weeks later, the temperature was normal, pulse 80, the thighs about 135° , knees 90° . A double inclined plane with joint at the knees was then attached and traction continued both from thighs and legs, with weight and pulley, until both limbs came down quite straight as far as knees and hips were concerned. The adduction of the left thigh, however, was obstinate, but was overcome somewhat by traction and counter extension. It was then easily seen that the left limb was the shorter, and with the anterior superior spines as points of measurement, the left was $\frac{3}{4}$ inch shorter than the right. Was this subluxation or absorption of the head of the bone? The child being very nervous and apprehensive and much indulged, it was impossible to make examination by manipulation until almost the present time, but Nelaton's line relation to the trochanter still remained the same, $\frac{3}{4}$ inch difference, passive rotation was not possible, indeed absolutely opposed or impossible so that no arc or rotation could be estimated to compare with the other hip. Tenderness still remained, but was very much relieved.

The tendency to adduction, and knee flexion, foot inversion, confirmed my original suspicion of subluxation and the X ray picture of to-day, May 28th, shows such to be the case, the head of the bone lying up on the ilium.

The further treatment of this case is being carried out by a double Phelps hip brace until all tenderness in the joints has disappeared, then passive motion, massage and frictions will be adopted.

I shall make an attempt to replace the left hip joint and trust it may be successful.

The right ankle in this case early showed signs of trouble, and was put up in a plaster of Paris case at right angles. This was removed after three (3) weeks, but still rigidity and tenderness remained, and it was put up again and left until three (3) weeks ago, when it was removed. There was no pain nor tenderness on manipulation, but rigidity persisted, and pointing of the foot from the contraction of the strong posterior tibial group. After the ankle has been in plaster some time, and the consequent slight deformity corrected, a splint was applied to prevent recurrence until the anterior group of muscles can hold their own.

Inflammation of the interphalangeal joint of the great toe, right side, also occurred, but subsided through rest and use of a splint. The child can now move the right hip voluntarily fully 30° , the left limitedly about 10° , both knees slightly. Another feature in this case was the peculiar infiltration and tenderness (deep) with œdema about the knee joints; both taking it on some distance above and below the joint. It was hardly a periostitis, but osteo-myelitis was suspected and feared. The involvement of the two knees did not occur at the same time, but followed on each other, and became so serious a matter that to secure rest they were put up in plaster for three weeks, by which time the trouble subsided. It occurred to me that attempted motion of the joint might have been the determining cause. Perfect motion is expected in all the joints but the left hip, in which I trust a good result also will be brought about.

Septic Typhoid Arthritis.—

CASE IV. A. M., æt. 19, was admitted to Dr. Armstrong's ward, Montreal General Hospital, May 11th, 1897. Had had typhoid fever some three months previously, been treated in a hovel in the country and came into the hospital with scar tissue covering the trochanters and sacrum. Had had bed sores extensively which laid bare the bones of these parts. The left hip was ankylosed in slight flexion, the right dislocated, posteriorly, the right knee lying over the lower portion of the left thigh, both knees acutely flexed and ankylosed. In all these joints there was very slight motion. Of course, the patient was unable to stand or walk. Treatment was applied by extension, weight and pulley similarly to last case and patient walked out of the hospital on crutches on July 21st. This was evidently an instance of mixed infection and, like Prof. Keen's case, the bed sores might have been the port of entrance. The reduction of the dislocation was impossible.

Case Reports.

AORTIC DISEASE WITH ANOMALOUS SIGNS DUE TO ABERRANT CHORDÆ TENDINEÆ.

BY

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The patient whose disease is about to be reported, first came under my notice in the Out-patient Department of the Royal Victoria Hospital early in the winter of 1896. He was a well-developed labourer of forty years of age. He complained of pain in the chest, which first began to trouble him after an attack of acute rheumatism in 1893. During the three years since that illness he had felt thoracic pain only occasionally, but in July of 1896 it became more severe and frequent, extending widely from beneath the sternum to the right and left and through to the back. Dizziness was sometimes felt. He was admitted to the ward on December 14th, 1896.

In his past history the following points are to be noted. He had done much heavy work. In 1880 he had a chancre, or, at least, the available history concerning an infection at that time, would lead one to conclude it was a chancre. In 1892 he was treated for a right-sided popliteal aneurism by Dr. Shepherd (the femoral artery was ligated). In 1893 he suffered, as already noted, an attack of acute rheumatism, and about eighteen months before seeking advice, at the Royal Victoria Hospital, he sustained a severe strain in wheeling a heavily loaded wheelbarrow. It will be seen that sufficient cause for disease of the circulatory system will be found in the history.

His condition when first examined was that of a well-nourished man in a state of comparative comfort and well-being, with the complaints as above described. The skin showed signs of smallpox many years before. There was slight pallor of the mucous membranes; the sclerotics were icteroid. There was no œdema or dyspnoea; the finger nails showed slight clubbing; the inguinal glands were enlarged. There was a scar on the glans penis near the corona. The right thigh showed the cicatrix of a surgical wound made for the treatment of the popliteal aneurism, already mentioned. The lungs, nervous system, abdomen, and urine gave negative results on examination. The chief interest centred about the circulatory system. The arteries were slightly

sclerosed. The pulse was somewhat collapsing, of good tension, regular rhythm and volume. There was visible pulsation of the vessels of the neck; the carotids springing forward in systole. Palpation revealed a diffuse precordial pulsation with a prolonged diastolic thrill palpable on the right as far as the nipple line. The thrill was also palpable in the suprasternal notch, but its maximum intensity was about the third and fourth cartilages to the left of the sternum. The apex of the heart showed some displacement to the left, being located in the fifth interspace one inch outside the nipple. The transverse dulness encroached upon the left edge of the sternum. The sounds at the apex were decidedly weaker than normal; at the base one could not discover any accentuation of the second sound either pulmonary or aortic. At the apex a faint diastolic murmur and a systolic murmur were audible. In addition to these one could hear a musical murmur, diastolic in rhythm, widely propagated over the chest, having its point of maximum intensity, however, at the third left interspace. This murmur was of rather high pitch and was audible to the patient. It could be distinctly heard at a distance of from 18 to 24 inches from the chest wall, and on one occasion in a quiet room the murmur was audible at a distance of fully five feet, the patient dressed and sitting in a chair. The diagnosis of aortic and mitral regurgitation was made. Various speculations, however, were made concerning the origin of the murmur just described.

The patient was discharged, and for several months he passed from under our observation. He returned in May of 1898. About sixteen months of pretty active life with freedom from distress had been enjoyed, but in April he became very short of breath and his sleep was greatly disturbed by hideous dreams and attacks of dyspnoea. The complaints made on this occasion of admission to the hospital differed with those at first noted. Precordial pain was the prominent feature of the case at first; now he complained of sleeplessness and dyspnoea,—dyspnoea even when at rest, and sometimes amounting to orthopnoea.

Along with these allied complaints one found on examining the heart that the cardiac dulness had increased. The apex was now in the sixth space, the transverse dulness $1\frac{1}{2}$ to 2 inches greater. There was epigastric pulsation. A thrill was uncertain. The musical diastolic murmur heard so widely was of a lower pitch, yet retaining its musical quality, but was no longer audible away from the chest wall. A "to-and-fro" murmur was heard at the xiphoid cartilage.

The patient wished to go home and was discharged on the first of June. He remained in bed until October 6th, when he was finally readmitted to the hospital, where he died on the 31st of the same month. The course of the case during the summer months was marked by hamoptysis with signs of dulness (infarct) over the right lung at the

base, and subsequent hæmorrhagic effusion, gradually increasing œdema of the extremities and body, the occurrence of hæmorrhoids, a diminution in the amount of urine with albuminuria, enlargement and tenderness of the liver with ascites, further increase of the cardiac dulness, and an occasional presystolic murmur at the cardiac apex. The musical diastolic murmur was constantly present, though not so plainly heard.

The treatment was directed towards the failing compensation of the heart, and consisted in digitalis, morphine, strophanthus, calomel, strychnine, potassium iodide, in various combinations and according to indications. The right pleura was twice aspirated. The œdema was relieved by multiple puncture of the skin under antiseptic precautions. He died very suddenly on the evening of the 31st of October.

The diagnosis of this case finally made was aortic insufficiency, mitral insufficiency with stenosis (?), myocarditis, arterio-sclerosis, secondary nephritis, right pulmonary infarct of lower lobe, and hydrothorax.

The autopsy confirmed the diagnosis with but one exception and revealed the cause of the anomalous signs. That condition which was always doubtful in this case, viz., mitral stenosis, was not found to be present and the presystolic murmur sometimes heard as compensation was more completely lost and must evidently have been the murmur of Mitral associated with aortic regurgitation. But little interest attaches to the autopsy, apart from that which describes the cardiac condition.

Cor bovinum was found, the measurement being 14.25 cm. from side to side. The chambers were greatly enlarged, the right auricular walls were muscular; the tricuspid orifice admitted four fingers; the right ventricular wall was greatly hypertrophied. The mitral orifice admitted easily the tips of four fingers. The valve showed no thickening, the only abnormal condition about it, apart from the enlargement of the mitral orifice, being found in the insertion of one of the chordæ tendinæ arising apparently from a papillary muscle and attached fully one-half an inch from the aortic cusp upon its ventricular surface and somewhat to the left of the median line. Springing from the left side of the ventricle another fine tendon was seen to pass towards the muscle already described, and to join it just as it passes beneath the margin of this valve cusp as shown in the photograph. (Fig. 1.) Another shorter and somewhat coarser fibrous band united this papillary muscle to the ventricular surface at a point adjacent to the first. The aortic valve was incompetent, the cusps being greatly thickened and shortened.

The anomalous signs in this case give it the interest it possesses:—

(1) It is anomalous to find *two diastolic murmurs*. We had the high-

pitched musical murmur and the low-pitched characteristic diastolic murmur of aortic insufficiency.

(2) It is anomalous to find a diastolic thrill so widely palpable. According to Gibson,—“They are rarely felt except in the precordial region, more especially towards the lower part of the sternum and in the neighborhood of the apex.”

(3) A murmur audible so far from the chest-wall is rarely observed.

(4) With equal truth it may be said, further, that a musical diastolic murmur is an anomalous sign.

Concerning the cause of this quality of the murmur (4), we thought upon diverse possibilities, and chief among these was a condition of ruptured or distorted aortic cusp occurring in an atheromatous subject at that time when he sustained a heavy strain with an overloaded wheelbarrow. It is well known that the aortic valve segments are those injured most frequently by an over-strain, and some years ago C. Theodore Williams reported a case having a musical diastolic murmur which was subsequently shown to be due to a damaged valve-cusp, the border of which “was retroverted into the ventricle and vibrated in the regurgitant stream.” Another possibility was that some fibrous band was floating in the blood stream, one end attached, or, perhaps both ends fixed. How true this last possible condition was the autopsy has shown. It would appear that this arrangement of the chordæ tendineæ is a congenital anomaly. They may find their point of valvular insertion at the edges or upon the ventricular surface of the valve, but rarely is it found so high up. Such an anomaly was without signs while the blood stream flowed in the normal direction; once regurgitation took place through the aortic orifice the stream of blood set these cords in vibration and, under the increased tension induced by a dilating ventricle and before myocardial changes became pronounced, the musical murmur was produced. Then followed the period of dilatation with muscular changes inducing loss of tone and both thrill and murmur became less pronounced.

Aberrant chordæ tendineæ, though comparatively rare, have been observed by many writers, and in some instances a diagnosis of their presence has been made during life. H. Huchard, in the *Revue de Médecine*, 1893, describes five cases, three of which were diagnosed during life. The greater number of such cases, Huchard believes, are congenital anomalies, while but a few are due to pathological changes, principally those due to atrophy of the left ventricular trabeculæ. They are very rarely found in any other chamber of the heart. Murmurs produced by them are associated with those found in the upper part of the ventricle, and are almost always systolic in rhythm and possess a musical quality.

Another point among many in cardiac cases, which the observation of this case teaches, is that relief of cardiac pain and the agonising features incident to the disease when the heart shows moderate hypertrophy, are greatly relieved when dilatation occurs, and, then, too, the other features of the case change. If you will remember, pain was the chief feature at first, when no œdema and no dyspnœa were present and the apex was in the fifth interspace; that when he came again for advice dyspnœa was great and the apex was in the sixth interspace and œdema supervened. This point was discussed by Musser in 1897.

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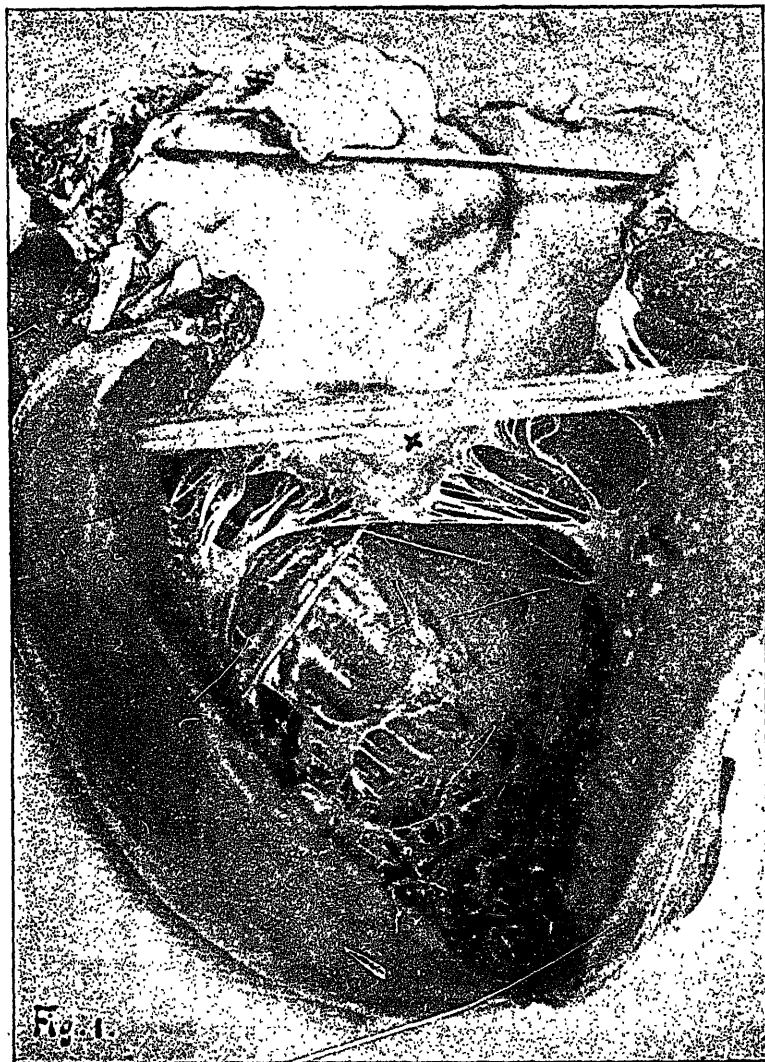
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View of Left Ventricle and Mitral Valve, with (x) point of attachment
[*aberrant chordae tendineae*].



Fig. 2.—The Left Ventricle viewed from below.

O. Aortic orifice—valves incompetent.

CASE OF LACERATION OF THE INTESTINE WITH RUPTURE OF THE MESENTERIC ARTERY WITHOUT A SKIN WOUND.

BY

F. J. SHEPHERD, M.D.,

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J. S., aged 30 years, a stout man weighing over 200 pounds, was brought to the Montreal General Hospital on May 24th, 1898, suffering from a severe injury of the abdomen. Whilst bicycling on Dorchester street he collided with the shaft of a coal cart which turned in front of him to go down Mountain street. He was, of course, thrown from his bicycle and suffered severe pain and shock. The ambulance was called and he was sent to the Hospital.

His condition on entrance was most serious, his pulse could hardly be felt at the wrist, the surface of his body was cold, and he had sighing respiration. Vomiting of large quantities of coffee-ground material was continuous and he complained of severe pain in the abdomen. There was a contusion seen immediately below and a little to the left of the umbilicus; the surface was not broken. Over this region on percussion a dull note was elicited everywhere, and this dullness extended rapidly.

I saw him an hour after admission and his general condition was much the same as that described above, the local conditions were, however, rather different, for at the site of the contusion a large subcutaneous tumour was seen, and this on palpation was distinctly fluctuating. Patient's pulse was hardly perceptible at the wrist, the whole surface of the body was cold and clammy and he was becoming very drowsy. Evidently internal hæmorrhage was going on, and immediate operation was advised and consented to.

He was taken to the operating room and ether was administered. An incision was made in the median line and on cutting through the skin I found I was in the abdomen, the recti muscles having been torn through. An immense amount of blood gushed out and also a lot of intestine protruded. The bleeding being furious, with the help of Dr. Armstrong, the deeper part of the abdomen was exposed, and then it was seen that the small bowel had been torn completely across and the rent had continued on through the mesentery down to its attachment to the spine, tearing across near its origin the superior mesenteric artery. This was the source of the hæmorrhage and the vessel was with difficulty secured. Whilst this was being done, normal saline solution

was transfused into the veins to the amount of five pints, and hypodermics of brandy were given. At the same time the rent in the mesentery was closed and the bowel was sutured with a continuous Lembert. The abdomen was then filled with warm saline solution and closed with silk-worm gut sutures.

Although comparatively little blood was lost after opening the abdomen, the man's condition after leaving the table was very alarming, he never recovered consciousness, but only lived two hours. Even had the operation been successful, the cutting off of the blood supply to the greater portion of the small intestine would inevitably have caused gangrene of a considerable part of the bowel, and thus the case was hopeless from the first. The accident is a rare one, and I do not think there are many cases reported in literature.

RETROSPECT OF CURRENT LITERATURE.

Medicine.

UNDER THE CHARGE OF JAMES STEWART.

The Influenza Bacillus and Pneumonia.

W. H. SMITH, M.D., Boston, From the Clinical Pathological Laboratory of the Massachusetts General Hospital.—*The Journal of the Boston Society of Medical Sciences*, Vol. III., No. 10.

The relation of the influenza bacillus to pneumonia is a subject that has been attracting a great deal of attention during the past few years on account of its great practical importance. There is by no means a consensus of opinion either as to the frequency or characters of the pneumonic process which is induced by the influenza bacillus. Dr. Smith's paper is a valuable and timely contribution to this end. An analysis of the post-mortem records of the Massachusetts General Hospital, made to determine the number of cases of pneumonia in which the influenza bacillus has been isolated from the consolidated areas, showed that in 73 cases of acute broncho or lobular-pneumonia, the influenza bacillus was isolated five times, while in 23 cases of lobar pneumonia it was only found once and then in conjunction with the pneumococcus. To ascertain if the six cases of pneumonia from which the influenza bacillus had been isolated resembled one another in any particular clinically, macroscopically or microscopically, a very elaborate analysis was made of all six cases. The patients in all six cases were past middle life and were suffering from degenerative changes in the arteries or from malignant disease. The onset of the disease was not in the great majority of cases sudden, as we nearly always find it to be in cases of simple pneumonia. The fever was moderate and there was but slight variation in the pulse and respirations. In no case was rusty sputum obtained. Both influenza bacilli and pneumococci were met with in one case (lobar) in the sputum during

life. The physical signs were chiefly a few fine moist rales sharply circumscribed. In only one case was there dulness with increase of the voice sounds and this was a case where several inflammatory foci were fused together.

Dr. Smith confirms the statement made by Frankel that it is not possible to diagnose an influenzal pneumonia from the naked eye appearance of the lung. The inflammation in five of the cases was lobular, but the foci were multiple and often so fused together as to bear a close resemblance to lobar pneumonia. It was common to meet with foci widely separated, one focus being at the apex and another at the base. Pleurisy was present in three cases, once as an organised pleurisy and twice as a circumscribed fibrinous exudate overlying foci of consolidation. In one of the cases where foci of consolidation were immediately beneath the pleura, softening with an abscess formation had occurred. This is important to note for cases have been reported where in the course of an influenza pneumonia a sudden pneumothorax has developed. Mosler, Fürbringer and Kundrat have reported such cases. In no case was gangrene of the lung or empyema present. The bronchi were found injected and filled with muco-purulent fluid in every case. In no case was there found any splenic enlargement.

All of the cases were characterised by an exudate of leucocytes into the alveolar spaces. Except in one case (lobar) there was a marked scarcity of fibrine in the exudate. In all, the capillaries were injected and the bronchi filled with leucocytes and often destruction of the lining membrane of the bronchi had occurred.

The following are the conclusions reached by Dr. Smith from his interesting study:—

(1) Cases of pneumonia caused by the influenza bacillus may give few if any signs clinically of their presence beyond a moderate degree of fever and a few fine moist rales, more or less circumscribed.

(2) The influenza bacillus by itself is capable of producing pneumonia; however the pneumococcus is frequently associated with the influenzal bacillus in its production.

(3) The type of the pneumonic process is usually broncho or lobular, frequently consisting of multiple foci with a tendency to involvement of the lower lobe of the left lung.

(4) Upon microscopic examination the exudate is found to be composed largely of cells, chiefly leucocytes. The amount of fibrine present in the exudate is small. Bacilli are usually present in large numbers inside the leucocytes, both in the alveolar spaces and in the bronchi.

The Prevention of Valvular Disease of the Heart.

RICHARD CATON, M.D., F.R.C.P. "On the Prevention of Valvular Disease of the Heart."—*Edinburgh Medical Journal*, April, 1899.

The subject of this communication is one of the highest importance in the treatment of acute rheumatism. The writer proposes several questions which he intends to answer in this paper. "Are there no means of prevention of endocarditis?" and when it does occur:—"Can we in no way help nature to produce as complete a cure in the heart as in the joints?"

The author's methods of prevention consist chiefly in protecting the subjects of rheumatic attacks against sudden changes of body temperature by clothing them with flannel garments, keeping the patient in almost absolute rest under a treatment with mild cholagogues and salicylates and nourished with a light diet from which red meat is excluded. Blisters followed by poultices may be applied to those joints in which the pain is obstinate. The daily amount of salicylates is diminished and prolonged rest, warmth and quiet are enjoined upon the patient after the painful symptoms have subsided. By this treatment 82 or 83 per cent. of Dr. Caton's cases escape complications.

In the second place the writer addresses himself to the "arrest of cardiac valvular mischief when it has begun." He claims for the salicylates no beneficial effects to this end, but recommends the adoption of such measures found effective for a refractory joint—the use of small blisters, etc. Small blisters about the size of a shilling are applied along the course of the 3rd, 4th and 5th intercostal nerves in succession, one at a time. The patient is kept in a recumbent position for several weeks. The heart's action is kept as quiet as possible. Salicylates are continued; 8 or 10 grains of sodium or potassium iodide are given three times a day. Dr. Caton lays great stress upon the maintenance of the patient at *rest* and, after considerable experience, claims most gratifying results.

Typhoid Fever Without Intestinal Lesions.

J. H. BRYANT, M.D., M.R.C.P. "Typhoid Fever without Intestinal Lesions."—*The British Medical Journal*, April 1, 1899.

This case is reported by Dr. Bryant, of Guy's Hospital, and a brief review of fifteen similar cases is found along with it.

The patient was a male, aged one year and nine months. He showed signs of ill health in loss of flesh, diarrhœa, vomiting and febrile state. The spleen was enlarged, the abdomen distended, and signs of broncho-pneumonia were present. The blood gave the Widal reaction. The patient succumbed to the disease about the end of the third week.

At the autopsy no lesions were found in the intestinal mucous membrane. Enlarged mesenteric glands were discovered and cultures taken from the glands "yielded an almost pure culture of the bacillus typhi abdominalis."

The case shows the necessity of a careful bacteriological examination and the application of the Widal test.

The Etiology of Scarlatina.

JOHN S. BILLINGS, JR., M.D. "The Occurrence of the Streptococcus Scarlatinæ (so-called) in Cultures from the Throats in Cases of Scarlet Fever."—*New York Medical Journal*, June 7, 1899.

W. J. CLASS, M.D., Chicago. "The Etiology of Scarlatina."—*Medicine*, June, 1889.

The question concerning the etiology of the exanthemata is slow in being fully answered. From time to time one sees the results of series of observations upon measles, small-pox and scarlatina. And while these show different results there can be but little doubt but that an answer must eventually become quite as clear as that which applies to typhoid fever or tuberculosis. Klein, in 1887, and Kurth, in 1890, described a streptococcus which they believed to be related to the disease. Dr. Billings has recently made cultures from the throats of 17 cases of scarlet fever. He concludes, from the results found in these cultures, that the so-called *streptococcus scarlatinæ* or *conglomeratus* does not occur in the throats in some cases of scarlet fever. It is either not constantly present or in the great majority is isolated with great difficulty.

Klein made his observations from cultures from the blood of patients, Kurth observed cultures from the throat. Both were workers in the Old Country, while Billings operated in America, and thus some cause may be found for differences.

Class refers in his article to the observation of Crajkowski, who, while isolating a diplococcus from the blood of scarlatina patients, does not claim it to be the germ causing this disease; to those of Klein already mentioned in this abstract; and to those of Edington, whose work was confined to the scales of scarlet fever patients, and who, while finding many forms of micro-organisms, isolated a coccus termed by him "the micrococcus capsiformis and a bacillus which he considered to be the causative factor in scarlatina."

While examining a large number of cultures taken from the throats of various forms of angina, Dr. Class found that large diplococci were frequently present and these were most constant in those cultures taken from scarlatina throats. The germ is polymorphous, being

found as a diplococcus like a very large gonococcus in tetrads, as a streptococcus, or as single coccus. After cultivation from the scales of 74 cases of typical scarlatina, from 50 throats of scarlatinal angina, and from the blood of 16 such cases and making of control tests, Dr. Class concludes that the germ is the specific causative factor of this disease.

W. F. Hamilton.

Medical Uses of the Röntgen Light.

FRANCIS H. WILLIAMS. "An Outline of some of the Medical Uses of Röntgen Light."—*American Journal of Medical Sciences*, June, 1899.

Until very recent times surgery has claimed almost a monopoly of the benefits accruing from a use of the X rays, but to-day, thanks to the careful research of Dr. Williams and his improvements in the technique of these methods, most useful information has been obtained for the internal clinician.

Perhaps the most interesting of his observations concern the chest, with special references to diseases of the heart and lungs, more particularly pulmonary tuberculosis. Illustrations which accompany his observations show that normally during respiration the diaphragm makes extensive excursions and the heart, too, changes its place. One can see, too, by means of the fluoroscope definite differences in the brightness of the lung area between the extremes of respiration—for in full expiration the lung area will appear much darker, containing as it does, at this period, more blood per cubic inch. The fact will explain then, how readily one may detect any condition of the lungs where local congestion, etc., exists, a condition, of course, often found in early tuberculosis and in cardiac disease. The excursions of the diaphragm possess a considerable degree of importance with reference to diagnosis, and one finds normally with the fluoroscope that on the left side the average movement in the adult is about $2\frac{1}{2}$ inches and on the right side there is a still wider excursion amounting to at least $\frac{3}{4}$ inch more. When investigating for the presence of pulmonary tuberculosis abnormalities must be looked for in two directions; first, the diseased portion appears darker than in health, and, secondly, the diaphragmatic movements are restricted on the diseased side during full inspiration. It is true this can merely arouse the *suspicion* of tuberculosis, but is of considerable importance for confirmatory evidence, especially when the signs by physical examination are rather indefinite. In not a few instances, Dr. Williams has found evidence of tuberculosis when auscultation and percussion have quite failed to manifest the disease, and subsequent developments proved beyond a doubt the

presence of the malady In his opinion the shadows are not necessarily from a consolidation, but often merely from congestion, and on the other hand, it should not be forgotten that these same shadows may at times appear in the various forms of disease associated with debility, though as a rule their presence here is very ephemeral—hence the possibility of a differential diagnosis.

Cases, too, are cited where an examination for other conditions by means of X rays, revealed the significant shadows in the fluoroscope, thus suggesting for the first time the possibility of a tuberculosis. It is important, further, that pleural adhesions, so common apart from tuberculosis, do not appreciably affect the penetration of the rays, though they might naturally restrict the movement of the diaphragm. In such cases, however, no shadows whatever would appear.

Where doubts exist as to the presence of *pleural thickening* or *effusion* the fluoroscope may be used to some advantage, fluids presenting shadows against the X rays, and where free fluid exists the line of the diaphragm is obliterated. It is likewise held that by this means, too, one may know where best to aspirate the chest for the removal of the effusion, inasmuch as the most favourable site for the insertion of the needle may be ascertained.

The detection of *thoracic aneurism* when other methods have failed has long been known, and the value is more appreciated when one reads the cases cited by Williams to show the benefits. One instance is worthy of citation, viz., where cesophageal bougies were being passed for a stricture which was only correctly diagnosed after employment of the fluoroscope.

In the abdomen, apart from the already much discussed subject of the detection of calculi, it has recently been demonstrated that the X rays may be utilised for determining the exact location of the *stomach*, and in addition to the work done by Williams is the interesting article by Rosenfeld, describing a unique and on the whole not very elaborate method for the same purpose. While many have given subnitrate of bismuth for the purpose of determining the lower border of the stomach (the metallic salt being impervious to the rays as it lies in the stomach), Rosenfeld has employed a stomach tube filled with shot and by other devices is enabled to determine with fair accuracy the situation of the organ.

The researches of Dr. Williams are certainly eminently worthy of careful study, and one must admit that for medical purposes the fluoroscope has undoubtedly proved a valuable agent in the confirmation of diagnosis, and that in the X rays a method has been found which is certainly on a par with much that is esteemed good in physical diagnosis.

Surgery.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

Gunshot Wounds of the Abdomen.

STAPP. "Gunshot Wounds of the Abdomen.—*Bulletin of the Cleveland General Hospital*, January, 1899.

After giving the history of a very interesting case, Stepp quotes the following conclusions of Vulliet based on the study of three hundred and fifty-five cases, seventy-seven of which were treated on the expectant plan and two hundred and fifty-eight by laparotomy.

(1) To establish the fact of penetration the wound must be enlarged, probing being insufficient. Exploratory laparotomy must be performed at once in case of perforation.

(2) It is often impossible to decide from the symptoms whether the intestine is perforated or not; symptoms of peritonitis often accompany slight cases, while they may be absent in multiple perforation.

(3) Sure signs of perforation of the intestine as fistula or evacuation of a bullet per rectum, are very exceptional.

(4) Exploratory laparotomy is without danger.

(5) Both statistics and experiments show that spontaneous healing of intestinal perforation without septic peritonitis is rare.

(6) Early operation aids in the prevention of peritonitis, which, when once established, nearly always ends fatally.

(7) Even when death does occur it need not be attributed to a long and difficult operation; it may have been due to the gravity of the lesion. Operation has certainly saved many who would otherwise have died.

(8) If there are no abdominal symptoms present forty-eight hours after the infliction of the wound, perforation of the intestine can be excluded almost with certainty; if there are signs of peritonitis abdominal section and washing can give the only remaining chance for recovery. Deaths in the latter case are due to the expectant treatment and not to the operation.

(9) Shock is no contra-indication to operating; it is often caused by severe hæmorrhage, and the fear that the patient may die on the table must not preclude an operation which has saved life. In these cases stimulants and intravenous saline injections should be given freely.

(10) The incision should be median and long in the majority of

cases as this facilitates exploration. The cavity should be washed out and drained.

(11) The above conclusions apply only in civil life where it is possible to use aseptic precautions. In war, the question of operation versus expectant treatment must be considered as still unsettled.

A Bullet Embedded in the Heart for Thirty-Seven Years.

The Dublin Journal of Medical Sciences, 1899,

A correspondent of the *Baltimore Sun*, writing from Morgantown, W. Va., asserts that a man named William B. Smallridge, who died a few days ago at Glenville, in Gilmer County, carried a bullet in his heart for thirty-seven years. He was a member of Company E., First West Virginia Infantry, in the Civil War, and in September, 1861, while marching through Gilmer County, was shot by someone in ambush, the bullet entering Smallridge's chest at the lower point of the scapula on the left side, passing thence directly through the left lung into the left ventricle of the heart. The force of the bullet was so broken that it did not penetrate the inner wall, but the regimental surgeon pronounced the wound fatal and left Smallridge to die. He did not die, however, but was sent back up the Little Kanawha river in a skiff to his home in Glenville, where he recovered and has since lived. A few weeks ago, while on his death-bed, he asked Dr. G. O. Brown to make an examination of the wound after his death. This Dr. Brown and Dr. O. B. Beer did and found the bullet embedded in the heart. The man never suffered from any disturbance of the heart. His death was due to cancer. The report is confirmed by Dr. Beer in a letter to the *Cincinnati Lancet-Clinic* of November 19, 1898.

The Treatment of Appendicitis.

SOREL. "Du Traitement de l'Appendicite."—*Archiv. Provin. de Chirurgie*, 1er Mai, 1889.

The question of "how to treat appendicitis" would seem to be a very live one in France at the present time. It was the subject of discussion at a recent meeting of the Société de Chirurgie de Paris, and Professor Dieulafoy has recently stated in a communication to the Académie de Médecine that "there is no medical treatment of appendicitis." Professor Dieulafoy states that the mortality in appendicitis is large because surgery is considered a last resource and valuable time is lost during the application of medical treatment. Histories of cases are given where the surgeon has been called and operation performed only after the conditions permitting of cure have passed.

The mortality under medical treatment is stated to be 30 per cent., and under surgical treatment when adopted sufficiently early almost nil. Dieulafoy says:—"Operate in grave cases in twenty-four hours; in mild cases, in thirty-six hours;" and adds "if this formula were followed there would be no more deaths from appendicitis." Sorel is equally definite in his advice when he says:—"When called to a case having the symptoms of appendicitis it is your duty, without delay, to telegraph or telephone for a surgeon." He considers the use of ice and opium dangerous because they obscure the indications of the progress of the disease.

G. E. Armstrong.

Obstetrics and Diseases of Infants.

UNDER THE CHARGE OF WILLIAM GARDNER.

The Early Diagnosis of Pregnancy.

R. VON BRAUN-FERNWALD. "Ueber Frühdiagnose der Gravidität."—
Wiener Klin. Wochensh., 1899, 10.

The author extensively reviews the literature of the early diagnosis of pregnancy. He places but little reliance upon the early appearance of colostrum in the breasts, nor upon the bluish discoloration of the vulva and of the vaginal mucous membrane as early signs of pregnancy, as all may accompany other conditions. The softening of the vaginal portion of the cervix and the rhythmic contractions of the uterus are considered of no significance.

The most satisfactory signs of early pregnancy consist in the change in form of the uterus, and its softer consistency, both of which are apparent on careful vaginal examination (bimanual).

Braun-Fernwald began an investigation in G Braun's clinic in 1894 as to how early it was possible to establish the Hegar sign in pregnancy and this investigation he has been carrying on ever since. He found that by Hegar's sign pregnancy can but rarely be diagnosed before the end of the second month. The author finds the most important early sign of pregnancy is a change not only in the consistence but also in the shape of the body of the uterus, one side being thicker and softer than the other. He states that as early as the end of the first month one side may be double as thick as the other. The thicker side of the uterus is found to be soft, while the other is harder, approaching more to the consistence of the normal, empty organ. The softer, thicker part encroaches on the other smaller part beyond the middle line, and at the junction of these two parts there is a distinct longitudinal groove or sulcus, the fundus at the same time appears saddle-shaped with the shallow depression lying nearer the smaller horn. The longitudinal groove can most easily be felt on the anterior wall of the uterus.

In making the bimanual examination the author recommends that two fingers should be introduced into the vagina and separated as widely as possible, so that one finger may rest on the larger, and the other on the smaller part of the uterus. His explanation is that most probably the ovum becomes attached to the lateral wall of the uterus in the neighbourhood of a tubal orifice. By the development of the

ovum the uterus on that side becomes thicker and softer than on the other, the empty side. The sulcus, he thinks, probably corresponds to the margin of the ovum, but it may be a result of contraction set up by the stimulus of the examination, as his assistant believes that he has found that its location is changeable. He states that the inequality is so marked in some cases that the larger part of the uterus may be mistaken by the inexperienced for a small myoma. The author states that with practico pregnancy can be diagnosed early with a great deal of certainty. The earliest time he has made a diagnosis by this sign was three days after one period had been missed. He considers that by this sign it is possible to be sure whether abortion in the earlier weeks of pregnancy has occurred or not. If the sign is positive the ovum is still there, if negative then it has escaped. The existence of extra-uterine foetation is probable when other signs of pregnancy exist but this sign is absent.

In the discussion which followed the reading of the paper before the Obstetrical and Gynæcological Society of Vienna, Hülb stated that in his opinion this sign made possible a certain diagnosis of pregnancy at a much earlier period than any other sign. He regarded the sulcus as due to uterine contraction. Lott stated that he had noticed the sulcus and that he agreed with Hülb that it was probably due to contraction. Schauta stated that he had noticed the condition to which the author had drawn attention and agreed with him in his explanation of the increase in size and change in consistence in one-half of the uterus as due to the presence of the ovum. He also stated that in a case where he had diagnosed pregnancy by this sign, he later had an opportunity of examining the uterus and found that the ovum occupied the harder part of the organ, while the softer half was empty. This, he thought, corresponded to the state of affairs which made Hegar's sign possible, namely, that in the cervix more fibrous tissue existed, causing it to feel hard to the touch, while just above it, where there existed only muscle fibres, was the soft area, and above this again the hard area of the uterus in which was located the ovum. Therefore, the hard half of the uterus as described by von Braun-Fernwald, he thought, probably contained the ovum, while the soft part consisted of the soft muscular tissue of the empty half of the uterus. He thought that this sign of von Braun-Fernwald would prove of great value after it had been systematically studied and observed.

Fœtus Outside the Membranes.

DUBRISAY. "Hydrorrhœa avec Fœtus Extra-Amnioté."—*Bull. de la Soc. d'Obstet. de Paris*, Fev. 17 1899.

CH. MANGRIER. "Présentation d'un Placenta avec Fœtus Extra-Amnioté."—*Bull. de la Soc Obstet. de Paris*, Mars 16 1899.

Dubrisay reports a case of chronic hydrorrhœa where a very interesting condition was found in the placenta on delivery. The patient, a woman aged 29 years, whose previous pregnancies had been normal, became pregnant early in July, 1898. On October 30th, 1898, she noticed water dribbling away from the vagina. On examination the uterus was found as large as in the middle of the fourth month, the external os was patent, but the internal was closed. On pressing up the fœtus some of the water escaped and contractions set in, but passed away after rest. Much fluid continued to escape daily; on January 18th, 255 grammes came away. On February 13th strong labour pains set in and the child, presenting by the breech, was delivered spontaneously. It was a male and weighed three and a half pounds, and did well. The placenta was delivered two and a half hours after the child, without any difficulty. It weighed nine ounces and bore a detached cotyledon; the cord branched with two divisions inserted in the centre of the membranes. The amniotic cavity appeared as a little cap or cupola in the middle of the foetal aspect of the placenta, and was three inches in diameter. Thus the fœtus lay outside the membranes. The pregnancy continued in spite of the fact that the membranes had ruptured and the fœtus had probably escaped in part from the ovarian cavity and was probably in direct contact with the uterine wall.

Maygrier reports a case with the following history:—A laundress, aged 28, pregnant for the fourth time, entered the Maternity of the Charité on February 21, 1899. Her last period had ceased on November 16, 1898, and her pregnancy had advanced normally until February 26, 1899, when she was seized with labour pains and a small quantity of blood escaped. On examination, the fœtus was found to be alive, the fundus reached as high as a finger breadth below the umbilicus. The cervix was found to be long, but was permeable, and the vagina contained blood. The symptoms of labour disappeared and the patient left the hospital, but was compelled to return on March 10th as they reappeared. On the 14th she was delivered of a small dead fœtus, the placenta following in half an hour without accident. The placenta weighed 105 grammes and its uterine surface appeared to be normal. The membranes were complete, the opening being situated close to the edge of the placenta. On close examina-

tion the membranous sac which contained the fœtus was found to consist of thickened decidua and the chorion. The amnion formed a small cavity at the root of the cord and was too small to have contained the fœtus. The volume of this pouch of amnion was 40 c.m. cubic, while the volume of the fœtus was 170 c.m. cubic. The fœtus thus was contained in a sac formed of chorion and the decidua, and must have escaped from the amnion and existed for some time in the chorion.

Nursing by Women who have Suffered from Albuminuria During Pregnancy.

PIERRE BODIN AND CHAVANNE. "De l'Allaitement chez les Femmes qui ont eu de l'Albuminurie de la Grossesse."—*Bull. de la Soc. d'Obstetrique de Paris*, Mars 16, 1899.

After stating that the general opinion is that women who have suffered from albuminuria during pregnancy, or from eclampsia, should not be allowed to nurse their children, the authors quote Gamulin's 158 observations of women, who, having suffered in this way, had been allowed to nurse their children, without harm either to themselves or to their offspring. They then report a series of cases of their own observation. They separated their cases into two classes:—

- (1) Those who were only under observation during their stay in hospital.
- (2) Those who were under observation for some months after leaving hospital.

In the first class they report five cases, three of which suffered from severe eclampsia. In all the albumin disappeared before the tenth day in spite of their being permitted to nurse their infants. They conclude that in albuminurics and eclamptics nursing does not produce unfavorable effects either on the mother or on the children.

In the second class they report three cases where the albuminuria persisted for several months. They present diagrams showing that in these cases the children developed equally as well as those of normal, healthy women. They conclude that even when albuminuria persists in the urine, women should be permitted to nurse their children; that the degree of albuminuria is not affected as a rule by nursing, and that both mothers and infants should receive careful attention, and nursing should be stopped should complications or contraindications arise.

D. J. Evans.

Dermatology.

UNDER THE CHARGE OF G. GORDON CAMPBELL.

Acne Keratosa.

H. RADCLIFFE-CROCKER. "Acne Keratosa."—*British Journal of Dermatology*, January, 1890.

Crocker describes a disease not hitherto recognised as a separate entity under the name of Acne Keratosa. Four cases had come under his notice, the first in 1896, when he was not satisfied whether he had to do with an unusual form of acne vulgaris or a distinct disease; meeting, however, with three others of similar character during the past two years, one of which had already been described by Jamieson in 1896, he concludes that there is good reason to look upon it as a development of the common form of acne, but warranting a separate designation under the above name.

The disease in all the cases was of long duration, one having lasted for forty years. The lesions are described as finger-nail-sized, well-defined, excoriated patches covered with blood-stained crusts situated on the cheeks and chin, especially near the angles of the mouth. There are also numerous scars of old lesions of the same size and shape as the earlier ones, white to red in colour according to the duration. The lesions as a whole are symmetrical, taking all the stages together, but they come out singly or in very small numbers at irregular intervals, and are very persistent. They commence as a red, firm, tender lump on which a pustule usually forms and dries into a scab, or the epidermis is detached by the underlying lymph. The patient removes the scab from an irresistible desire to remove or squeeze out soft plugs, or horny, conical-like plugs about a twelfth of an inch long, which are imbedded in the skin, and give rise to great irritation, and sometimes pain and tenderness, until they are removed. This constitutes the characteristic feature of the disease. When the plugs are extracted the sore heals slowly, the whole process taking from weeks to months, and with a tendency to recur in the same place if all the plugs are not out, and in some instances to spread slightly at the periphery. The horny plugs were found, on examination by both Crocker and Jamieson, to be composed of epithelial horny cells with a few prickle cells and cell-nests. Crocker thinks they are derived from the hair follicle; Jamieson, that they arise from the sebaceous gland. The process appears to be due to

an inflammation analogous to that set up by a comedo and kept up by the horny plug until it is removed by the patient. The treatment consists in the removal of the plugs as early as possible and healing the sore by suitable antiseptic applications.

Congenital Syphilis.

GEORGE OGILVIE, B.Sc., M.B., Edin., M.R.C.P., Lond. "Congenital Immunity to Syphilis, and the So-Called 'Law of Profeta.'"—*The British Journal of Dermatology*, February and March, 1897.

Ogilvie, in a communication to the same journal in 1897, summed up the present knowledge of this subject in the following propositions:—

"Clinical evidence tends to show that healthy children born of syphilitic mothers during the secondary stage, may receive a transitory immunity to syphilitic infection."

"No facts exist to show that a child born of a mother suffering from tertiary syphilis receives any degree of immunity."

"No proof exists that a syphilitic father ever confers any degree of immunity upon his healthy offspring."

Dr. G. Archdald Reid states practically the same in the *Lancet*, 1897, when he says that:—"While a man can never confer immunity on his children, or a woman on children born to her before infection, or after recovery, a woman can confer immunity on offspring of which she is pregnant during her illness."

In an historical survey of the subject, Ogilvie shows that Friedrich J. Behrend, in 1860, pointed out that a woman suffering from general syphilis and bearing a healthy child does not communicate the disease to it by suckling. Guiseppe Profeta, in 1865, declared that the healthy offspring of a syphilitic mother could be suckled by her or by a syphilitic wet-nurse with impunity, whether the infection of the mother took place before or after conception. The immunity of the child, however, he concluded, passed off during later life, the duration during which it existed being not definitely stated. Profeta's argument was based on the assumption that the utero-placental circulation exposed the child in the highest possible degree to infection, and that its failure to take the disease in utero was evidence of a "constitutional indisposition to contract the disease." Since then the original statement of Profeta has been considerably widened until of late years it is often referred to as "The healthy offspring of syphilitic parents are immune to syphilitic infection."

E. Finger believes that the immunity may also be inherited from parents who are in the stage of late syphilis, basing his belief on a case in which a son, born eight years after his father had contracted the

primary lesion, was apparently immune, although exposed repeatedly to infection during his student days. This is insufficient evidence, several cases being quoted by Ogilvie to show that even in individuals without the presumed immunity derived from syphilitic parents, repeated exposure without infection is by no means unknown. In one case reported by Blondel, a young man, twenty years of age, failed to contract the disease after repeated exposure, but eight years later contracted a chancre, followed by a most intractable syphilis.

Opposed to these observations, there are numerous instances recorded in which the children of parents suffering at the time from well-marked tertiaries due to a syphilitic infection contracted before marriage, have contracted a syphilis often of a most severe form, the syphilis of the father seemingly not producing even a milder infection in the son. Ogilvie himself met with a case in which the son's acquired syphilis proved more intractable than that of the father and, in all, he has collected some sixteen cases, one of which may be referred to at length. In a case seen by Düring, both parents had had syphilis, in all probability before marriage. The first confinements ended in abortion; next came several syphilitic children, and finally a son, who, as far as could be ascertained, presented no syphilitic manifestations in infancy or childhood. At the age of 21 he acquired syphilis, and his disease was far from being a mild one in spite of treatment during a period of three years. Ogilvie concludes, then, that "the part of the so-called 'Law of Profeta,' which refers to paternal syphilis, is a theoretical cobweb, swept away by every-day practical experience."

On the other hand the influence of the mother in transmitting immunity or partial immunity to her offspring receives more support, but here again the evidence which exists in its support refers to mothers, who, at the time of confinement or later, have infectious or inoculable symptoms. That a woman without any local infectious lesion of the breast should not infect her offspring in suckling, even though she may have infectious lesions of the genitals or elsewhere, is held to prove nothing. And no evidence exists to show that during the tertiary stage of the mother's disease any influence is exerted by the mother's condition upon the child's organism. Ogilvie's analysis of the cases reported by Baerunsprung, Finger, and others, as proof of the correctness of Profeta's Law is very thorough, and shows that in almost every case the chances of infection were but slight, either through the mother having had no lesions on the breast or that she was undergoing antisymphilitic treatment, or because the child was removed from danger of infection at a very early date after its birth.

With regard to another side of the question, the possibility of the child's being born healthy and acquiring syphilis from its mother, Ogilvie gives a critical analysis of all the reported cases, and concludes that

although many of them are of doubtful value as evidence, some, at least, seem to hold their own against the most searching scrutiny.

"Infection *intra partum*," he considers, is of quite exceptional occurrence if it exists at all, most of the cases reported as such being examples of true inherited disease. "The explanation of the fact that syphilis is hardly ever, if at all, contracted by a child during its passage through its mother's genitals need not be sought in the child's immunity nor in its latent disease, if one bears in mind that the same applies to soft chancre which is generally admitted to be eminently contagious. I am aware of only one case in which a soft chancre was contracted by a child in this manner."

Ogilvie draws the following conclusions from his investigations of the subject:—

(1) No facts exist to prove that paternal syphilis ever confers immunity, partial or complete, upon the offspring, no matter whether at the time of procreation the father is actually syphilitic or has become immune to syphilis by previous disease.

(2) No facts exist to prove that maternal syphilis in its tertiary stage confers immunity, partial or complete, upon the offspring, or that the mother's immunity to syphilis acquired by previous disease is ever hereditarily transmitted to her child.

(3) It seems certain that mothers syphilitic before delivery rarely communicate the disease to their offspring in extra-uterine life. Such contamination has been observed in some cases of postconceptional syphilis. Whether it ever occurs in preconceptional syphilis we do not know.

In *preconceptional* syphilis two circumstances co-operate towards this result:—

(a) That it is exceptional for mothers with preconceptional syphilis, who give birth to healthy viable children, to present infectious lesions after delivery from which the child's infection could be derived.

(b) That infection by nursing, after the first year, from a woman's infection, is altogether exceptional.

In *postconceptional* syphilis also two points have to be taken into consideration:—

(a) That post-conceptional syphilis is comparatively rare.

(b) That acquired syphilis appearing in the child after the second month of life may, in not a few instances, have been mistaken for congenital syphilis, simply because the mother's syphilis dated back to a period previous to delivery.

These circumstances taken altogether with the effect of timely and appropriate treatment, may explain—to a certain extent, at least—the

child's apparent immunity from infection by its mother. Whether this explanation is altogether sufficient or whether we have to recur to the supposition of immunity to syphilis in the child, I am unable to say.

The child's intra-uterine immunisation by its mother's secondary syphilis is an interesting and ingenious theory not abundantly supported by facts. That such immunity seems to take place in some acute infectious diseases, either *in utero* or by suckling, does not materially enhance its probability in regard to syphilis."

Congenital Syphilis.

CAMPBELL WILLIAMS, F.R.C.S. "Congenital Syphilis; A New Theory."
The British Journal of Dermatology, February, 1899.

Williams, in endeavouring to find an explanation of why the congenitally syphilitic child does not generally show dermal or condylo-matous signs of the disease until about the eighth to tenth week after birth, was struck by the fact that this time corresponded roughly to the period intervening between the primary sore and the appearance of rashes in the acquired form, the incubation period, in other words. He thinks that cases exhibiting this delay in the appearance are usually the offspring of mothers (infected through the medium of the embryo), who have the disease during gestation in such a mild form that it does not produce any but the slightest symptoms, often recognised as syphilitic except through their amenability to mercurial treatment. While the child is *in utero* its tissues are practically a part of the mother's and whatever influence is at work in modifying or keeping in abeyance the mother's symptoms is equally potent in the child, the inference being that it is exerted through the circulatory system. When, however, the child gains a separate existence the power of resistance to the disease gradually wears out, and in the third or fourth week the symptoms of the inherited syphilis make their appearance. "It is almost as if the infant had come into the world charged with a maternal dose of antitoxin sufficient in amount to mask for a time the true state of affairs, and that its own rapidly growing tissues failed to continue its manufacture."

Williams holds that the "specific taint of infants born of syphilitic women is in direct relation to the virulence of the disease in the mother," and distinguishes four degrees:—*first*, which results in abortion; *second*, the child is born alive or dead with syphilitic manifestations; *third*, the lesions appear almost immediately after birth; and, *fourth*, when the lesions do not appear until after a period of apparent health. In the last class the manifestations may not appear for years, as eye or ear symptoms.

In the discussion which followed the reading of this paper it was shown that the same idea had been advanced by Mr. Arthur Ward some two or three years ago, i. e., that the immunity of the foetus was due to an antitoxin prepared by the mother and sent through the placental circulation, but that the child was unable to manufacture this antitoxin for itself.

G. Gordon Campbell.

Canadian Medical Literature.

UNDER THE CHARGE OF KENNETH CAMERON.

[The editors will be glad to receive any reprints, monographs, etc., by Canadian writers, on medical or allied subjects (including Canadian work published in other countries) for notice in this department of the JOURNAL. Such reprints should preferably be addressed to Dr. Kenneth Cameron 903 Dorchester street, Montreal.]

The Canadian Practitioner and Review.

March, 1899.

1. Hofrath Fuchs' Clinic, JOHN P. MORTON.
2. The Local Treatment of Intra-Uterine Sepsis, A. GROVES.
3. Local Treatment in Puerperal Infection, ADAM H. WRIGHT.
4. Cardiac Neuroses, JOHN FERGUSON.
5. Obstetrical Methods in Dublin and London, K. C. McILWRAITH.
6. Progress of Gynaecology, A. LAPHORN SMITH.

April, 1899.

7. The Soldier and the Surgeon, G. STERLING RYERSON.
8. A Case of Acute Streptococcus Infection, W. C. WHITE.
9. Two Cases of Poliomyelitis Anterior Chronica, ALEXANDER McCARG.
10. Twins, each with Syringo-Myelocoele, H. A. WRIGHT.

May, 1899.

11. The Astragalus in Congenital Talipes Equino-Varus, CLARENCE L. STARR.

2. 3. These two papers deal with different methods of treatment of puerperal infection. The first has appeared in this JOURNAL (March). WRIGHT says that when signs of puerperal infection appear—such as headache, relative or absolute insomnia, rapid pulse (80 or more), vague impressions of cold, elevation of temperature—treatment should be commenced at once without waiting for the grosser signs. These premonitory symptoms always appear not later than the second day. For general systemic treatment he relies chiefly on active catharsis, using

especially calomel and Epsom salts, with a view to having from four to twelve evacuations in the twenty-four hours. When local treatment is undertaken, it should be carried out in a thorough and systematic manner. Clean and inspect the vulva and vagina carefully, using a speculum, and being sure that every portion is seen. If the surface of the cervix is clean and the cervical lochia is sweet, do not invade the uterine cavity. If decomposition of clots of lochia is found in the vagina, use an antiseptic vaginal douche twice a day. If so-called diphtheritic patches are found in the vagina or on the cervix, apply once a day a 20 to 90 per cent. solution of carbolic acid, and then dust with iodoform. If sutures have been introduced for torn perineum, it is generally, or always, advisable to remove them. If portions of placenta, or membranes, or debris of any sort are found, scrape thoroughly and remove. There is no instrument so good for this purpose as the finger tip. Wash and pack with iodoform gauze. He thinks that the intra-uterine application of tincture of iron is not entirely free from danger.

4. FERGUSON describes the various cardiac neuroses, which he divides for the convenience of study into motor and sensory. The motor derangements would include bradycardia, tremor cordis, delirium cordis, tachycardia, palpitation, and arrhythmia; while the sensory derangements are limited to the forms of angina.

10. WRIGHT describes an interesting case. The mother was a healthy woman in her sixth confinement, four children are all healthy, but one was still-born at term. Labor in the case was rapid and easy. The twins both presented by the breech, and had separate membranes and placentas. Both were males and each had spina-bifida in almost identically the same position, viz., the lower dorsal region, and each was hydrocephalic. The children weighed five, and five and a half pounds respectively. The first born and weaker child lived ten days, the other three months and nineteen days. In each there were convulsive movements. The bowels and bladder acted naturally. The lower extremities were paralyzed.

11. STARR describes the pathological anatomy of the astragalus as seen in club-foot. In this deformity all the bones of the foot take part, either as an alteration of the shape of the bones, or as an alteration of their relation one to another. The two bones in which an alteration in shape is a prominent feature, and the astragalus and os calcis, and of these the astragalus shows the most change. The remainder of the bones are changed in their relation one to another; but very little, if any, change in shape is noted. On account of mal-nutrition and certain restrictions in movements the bones generally are smaller than normal, and the astragalus shares in this decrease in size.

The Canadian Journal of Medicine and Surgery.*March, 1899.*

1. No evidence in America of Pre-Columbian Leprosy, ALBERT S. ASHMEAD.
2. Asylum or Hospital—Which? ERNEST HALL.

April, 1899.

3. Treatment of Pulmonary and Laryngeal Tuberculosis by the New Antiphthisic Serum, T.R. (formula of Fisch), with Remarks on the Etiology of the Disease, W. FREUDENTHAL.
4. Pulmonary Tuberculosis—Treatment, J. HUNTER.
5. Prairie Chicken Shooting in Minnedosa, A. J. HARRINGTON.
6. Applicability of Tesla's System of Molecular Exercise to the Cure of Disease, A. S. ASHMEAD.

May, 1899.

7. Clinical Report on Three Cases of Unusual Interest, THOMAS H. MANLEY.
8. Remarks on the Treatment of Club-Foot, Based on the Personal Experience of Three Hundred Cases, B. E. MCKENZIE.
9. The Correlation of Insanity and Crime, EZRA HURLBURT STAFFORD.

8. MCKENZIE describes the treatment he followed in three hundred cases of club-foot. In more than two hundred, or forty per cent., there was deformity in both feet, and twenty-seven per cent. had traumatism or paralysis or other disease as the cause of the deformity. From his experience he considers that the prognosis in ordinary non-paralytic club-foot is good. In children restoration to form should be perfect, and function should closely approximate the normal. Restrictive methods, either by dressings or apparatus, should be as little employed as possible. Persistent manipulation improves function and development. Operative treatment must be thorough. No part of the correction of deformity should be left, hoping that mechanical means will complete the work. Intelligent and long-continued after-treatment is essential to a final good result. Properly constructed boots should be worn and the foot retained in the corrected position at night. Age is no bar to successful treatment, eminently satisfactory results may be obtained in adult life. Even in the case of adults the more heroic methods of operation in many cases are not called for. The prognosis in paralytic cases will vary according to the nature and degree of paralysis.

The Canada Lancet.*March, 1899.*

1. Congenital Dislocation of the Hip, B. E. MCKENZIE.

April, 1899.

2. Recent Advances in Brain Surgery, HENRY O'NEILL.

May, 1899.

3. Abstract of an Address on a Proposed Scheme for a Dominion Medical Council, T. G. RODDICK.

1. MCKENZIE discusses congenital dislocation of the hip, and epitomizes the present status of surgical knowledge and practice upon this important subject. The dislocation exists at the time of birth. The proportion of cases to the whole number of children born is very small, and the deformity usually passes unrecognized till the time when the child is learning to walk. The anatomico-pathological conditions are quite different from those present in ordinary dislocations, the insecure relation of the femur to the pelvis causes very marked disability and limp. In children under six or seven years, bloodless and successful reduction can be effected, producing ideal results, but in cases of older children, and if more conservative measures fail in younger children, reduction and cure can be effected by incision.

Dominion Medical Monthly and Ontario Medical Journal.*March, 1899.*

1. On the Presence of Cholin and Neurin in the Intestinal Canal During Its Complete Obstruction.—A Research on Auto-Intoxication, BEATTIE NESBITT.

2. Two Months' Work in General Gynæcology and Abdominal Surgery, A. LAPHORN SMITH.

April, 1899.

3. Acne Vulgaris and Its Rational Treatment, GRAHAM CHAMBERS.

4. Traumatic Tetanus (or Lockjaw) as a Germ Disease, with Treatment by Internal Antisepsis.—Reports of a Case of Recovery in a Horse, W. R. ROOMÉ.

May, 1899.

5. Recent Cases from Practice, Illustrating Four Types of Ovarian Cystomata, with Photographs, HUNTER EMORY.

6. Some Features of Medical Nomenclature, A. F. MCKENZIE.

The Maritime Medical News.*March, 1899.*

1. Albuminuria, E. F. MOORE.
2. Arsenical Caustic Treatment of Cutaneous Cancers.—A House Epidemic of Syphilis, W. S. GOTTHEIL.
3. Two Cases of Injury to the Brain, ALEX. MACNEILL.

April, 1899.

4. Report of a Case of Probable Thrombosis of the Middle Cerebral Artery, J. A. MACKENZIE.
5. Patent and Secret Nostrums, R. MACNEILL.
6. Leucocytosis, W. L. ELLIS.

May, 1899.

7. Sterilization of Catgut, T. J. F. MURPHY.
8. Nomenclature of Disease, JACQUES BERTILLON.

3. MACNEILL reports two very interesting cases of brain injury. A young man was injured while in the act of shooting. The barrel of his gun separated from the stock, the barrel kicking backwards and the portion with the screw which connects the barrel and stock entered the cranium on the left frontal side about an inch above the orbit and three-fourths of an inch to the left of the median line. After an unknown period of unconsciousness he walked home with the end of the barrel fastened in the wound. The wound was washed and some brain matter, spicules of bone and shreds were removed. On the second day he became irrational and incoherent, but on the dressing of the wound about an ounce and a half of brain matter came away, and he regained consciousness and seemed all right. He made a perfect recovery.

The second case was that of a young man in whom the blade of a hayfork penetrated the skull on the left side of the head about three-quarters of an inch from the median line and a line drawn from one auditory meatus to the other over the head. He fell unconscious and remained so for ten minutes. After regaining consciousness he tried to speak, but could not. On the thirty-second day after the injury he spoke a few words. For the first three months he could with difficulty be understood, and then could say about a dozen words. It was three years before strangers could understand him. His speech was scanning and monotonous until eight years afterwards. He could speak both Gaelic and English before he was injured, but he has had to learn English as a child would, and has remained quite ignorant of Gaelic. He could sing before the injury, but it was nearly nine years before he re-

gained the power. His right arm and leg were paralyzed for three months after the injury.

Canada Medical Record.

February, 1899.

1. Procedure in Post-Mortem Medico-Legal Examinations (continued), CHARLES A. HEBBERT.

March, 1899.

2. Progress of Gynæcology, A. LAPHORN SMITH.

The Manitoba and West Canada Lancet.

February, 1899.

1. *Tænia Echinococcus*, GORDON BELL.
2. Tuberculosis in Our Milk Supply, DR. INGLIS.

1. BELL, in the laboratory of the Manitoba Medical College, fed two dogs with daughter hydatid cysts, which had been removed a few hours before from the liver of a patient in the Winnipeg General Hospital by Dr. Chown. After five weeks one of these dogs was killed, but nothing was found, either because insufficient time had been allowed for development of worms or because the scolices had been unable to obtain a hold, owing to an intestinal catarrh that the animal was suffering from at the time. The second dog was examined exactly nine weeks after being fed, when the lower part of the duodenum and the upper part of the jejunum were found studded with hundreds of mature *tæniæ*. They presented the appearance of delicate white filaments from 1-8 to 1-6 of an inch in length, with the head firmly fixed deep among the villi of the intestine. A stream of water failed to dislodge them and they retained their hold after being placed in a solution of formalin. Under the microscope they were seen to be formed of four segments, the last one alone containing eggs, in some of which the proscœlex could be distinctly made out. Throughout all the segments, as well as the head, clear, refractive granules were distributed, but their significance is unknown. This was the first time that the mature *tænia* had been seen in Manitoba, although in no part of America are hydatid cysts so frequent. There is no evidence of any case having originated in this country, they having been, without exception, imported from Iceland.

L'Union Medicale du Canada.

Avril, 1899.

1. Une Observation de Pseudo-Tabes, C. N. VALIN.

La Clinique.*Mars et Avril 1899.*1. *Eléments d'Analyse d'Urines*, R. ROGER.*Mai 1899.*2. *Grossesse avec Hydrorrhée Persistante Pendant Soixante Jours*,
JOSEPH E. DUBE.

CORRECTION.—In "Canadian Medical Literature," in the April Number of this JOURNAL, two regrettable errors occurred. On page 288, the original contributions headed *The Canadian Practitioner* should have been attributed to *The Canadian Journal of Medicine and Surgery*. And on page 291, *Canada Medical Review* should have read *The Maritime Medical News*.

Reviews and Notices of Books.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS. Edited by CHARLES JEWETT, M.D., Professor of Obstetrics in Long Island College Hospital, Brooklyn, N.Y. 736 pages. Octavo, with 441 engravings in colours and black, and 22 full-page coloured plates. Lea Brothers & Company, Philadelphia and New York, 1899.

Dr. Jewett has for years been widely known as a most successful teacher of obstetrics. His writings have shown him to be a man of keen scientific observation, a clear thinker and a brilliant author. All these good qualities are apparent in the work done by him in connection with this Practice of Obstetrics. He has associated with himself nineteen contributors, most of them being obstetric teachers in the leading medical schools.

The editor states in his preface that the work "aims to be a clear and practical treatise suited to the needs of medical classes and also to furnish in moderate compass a concise and comprehensive guide for the practitioner." His aims have been successfully accomplished, for the whole work is most admirably arranged, being clear and concise in its teaching and most scientific and thorough in its whole tone.

Part I. is devoted to Anatomy. It is well written and illustrated, some of the plates being very fine and many of them quite new and instructive. Part II. deals with the Physiology of Pregnancy. Parts III. and IV. are respectively the Physiology of Labour and the Physiology of the Puerperium.

The description of the mechanism and management of labour is very clear and concise, the instructions for case-reporting being particularly valuable. The employment of the antepartum douche is not recommended in ordinary cases and frequent vaginal examination in the course of labour is condemned. With regard to the choice of anæsthetics in labour, ether is recommended where it is necessary to induce surgical anæsthesia. It is claimed to be no less manageable than chloroform, and rather to stimulate than to weaken the uterine contractions. Chloroform is generally recommended in ordinary anæsthesia and is to be preferred in eclampsia and in tetanic contraction of the uterus. These sections are full of instruction and are well illustrated.

Part V. is concerned with the Pathology of Pregnancy. The chapters in this section on the pathology of the foetus are extremely inter-

esting and contain much that is new. The chapter on ectopic gestation is particularly valuable.

Part VI. is the Pathology of Labour. The chapters on the anomalies of mechanism by Drs J. C. Cameron and J. Clarence Webster, of McGill University, as could only be expected, form a clear, concise and in many ways quite original consideration of this portion of obstetrics.

Part VII., the Pathology of the Puerperium, contains a chapter on puerperal infection by Dr. J. Whitridge Williams, of Baltimore, which is certainly the most scientific and able contribution in the whole work. It presents the result of much original work and research. The author states that the only way in which a positive conclusion can be reached as to whether a given case is one of sapræmia or of septic infection, is by means of cultures taken from the interior of the uterus, when the putrefactive organisms will be found in the sapræmic form and the pyogenic organisms in the septic form. Full details are given as to the method to be followed in obtaining these cultures from the interior of the uterus.

Part VIII. deals with Obstetric Surgery.

The publisher's work leaves nothing to be desired and we can heartily recommend this volume as the best system of obstetrics existing to-day.

D. J. E.

ON FRACTURES AND DISLOCATIONS. By PROFESSOR DR. H. HELFERICH, of Griefswald. Illustrated with 68 plates and 126 figures in the text drawn by B. KEILITZ. Translated from the Third Edition (1897), with notes and additional illustrations by J. HUTCHINSON, Jr., F.R.C.S., Surgeon to the London Hospital. London, The New Sydenham Society, 1899.

This is certainly a very fine work on fractures and dislocations. The illustrations are works of art and are most beautiful illustrations of the text. It is concise and always to the point. It is to be highly commended. Unfortunately, it is not in the market in the ordinary way and can only be obtained by subscribers to The New Sydenham Society. This society has produced some most admirable books, and no physician could do better than to become a subscriber. The annual subscription is one guinea, to which two shillings and sixpence are added for extra postage to subscribers living on this side of the Atlantic. New members who subscribe for the current year, and not fewer than three past years at the same time, are allowed to select volumes from the surplus stock to the value of one guinea without additional payment. The number of volumes issued each year depends necessarily upon the number of members, the amount received from subscriptions during 1897 being nearly \$2,000. The publications con-

sist of translations of foreign authors which are not obtainable in English, selected monographs from foreign and domestic sources, etc. The society has also been publishing a lexicon of medical terms which is now nearing completion, an atlas of pathology similar to the well-known atlas of skin diseases published many years ago and still considered one of the most valuable of all works on this subject. Among the books to be issued for the present year, besides the one under consideration, is a fasciculus of the Atlas of Pathology, illustrating Hodgkin's disease from the original drawings (already issued), Selected Monographs from foreign sources, Sternberg's Monograph on Acromegaly, and Schlesinger's Monograph on Syringomyelia.

G. E. A.

MANUAL OF DISEASES OF THE SKIN. With an Analysis of Twenty Thousand Consecutive Cases and a Formulary. By L. DUNCAN BULKLEY, A.M., M.D., Physician to the New York Skin and Cancer Hospital; Dermatologist to the Randall's Island Hospital, etc., etc. Fourth Edition, Revised and Enlarged. G. P. Putnam's Sons, New York and London, 1898.

This, as the title indicates, is a book designed to meet the requirements of the student in dermatology and as such presents the subject-matter in as simple and elementary a manner as is possible with anything like completeness. This is a difficult task to undertake for skin diseases which have not as yet been satisfactorily classified, but the author has produced a very systematic and comprehensive book and one that will be found suitable for the beginner. At the back of the book there is a chapter on therapeutics containing the formulæ of over one hundred different prescriptions.

G. G. C.

THE CARE OF THE BABY. A Manual for Mothers and Nurses. Containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. Second Edition, Revised. Philadelphia, W. B. Saunders, 1898.

The second edition of this excellent book is sufficiently like the first not to require more than a notice that another edition has been found necessary from the rapid sale of the first. The work has been thoroughly revised and brought up to date in every particular and several new illustrations have been added. There is no doubt that it will continue to be in the future as in the past the most reliable guide we have for young mothers and nurses, and will also be of value to the medical student and general practitioner.

G. G. C.

ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By CHARLES E. DE M. SAJOUS, M.D., and One Hundred Associate Editors, assisted by Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. Volume III., Philadelphia, New York, and Chicago. The F. A. Davis Company, 1899.

We have in previous numbers of the JOURNAL commented favourably on this most admirable work of Sajous and his associate editors. The third volume is deserving of the same favourable criticism. Of the many interesting articles special reference may be made to the following:—"Infantile Myxœdema (Cretinism), by Professor Osler and Dr. Norton, of Baltimore; "Exophthalmic Goitre," by Professor Putnam, of Boston; "Goitre," by Professor Adami, of Montreal; "Dysentery," by Dr. Flexner, of Baltimore; "Endometritis," by Professor Byford, of Chicago; "Dislocations and Fractures," by Professor Stimson, and Dr. Keyes, jr., of New York; "Gout," by Dr. Levinson, of Copenhagen; "Hip-Joint Disease," by Dr. Reginald H. Sayre, of New York; "Eczema," by Professor Stellwagon, of Philadelphia; and "Hysteria" and "Hypnotism," by Professor Eskridge, of Denver. It will be noticed that these are all practical subjects and the reader in each of the papers will find the essence of the recent literature on the subject under consideration as well as the personal opinion of the writers.

G. E. A.

THE EXPLORATION OF THE URETHRA AND BLADDER. By M. TUEHMANN, M.R.C.S. Eng., M.D., Würzburg. With 26 Illustrations. London, H. K. Lewis, 1899.

This is a small book of about fifty pages well written and clearly illustrated. In the first two chapters the curve of the urethra and the shape of the bladder cavity when full and when empty are considered and the most modern teaching of anatomy given. These chapters are well worth reading. The important points in the anatomy of the parts are emphasised and the practical side always kept well to the fore. The remaining chapters are taken up in describing the introduction of forceps into the male bladder where they are made to catch the ureter on either side where it lies between the layer of the bladder wall. In this way the flow of urine into the bladder may be arrested on either side while it is permitted to enter from the opposite side and to escape along a groove in the handle of the forceps. The urine may be collected from either kidney according to the wish of the operator.

Dr. Tuelmann claims that this proceeding is almost painless and that after using this instrument for twenty-five years, he can say that he has never seen it do any harm to the parts held in the grasp of the forceps.

G. E. A.

THE ANALYSIS OF FOOD AND DRUGS. Part I., Milk and Milk Products
By PEARMAIN AND MOOR. London: Baillieres, Tindall & Co. 1897
pp. 152.

This work is clearly intended to be a practical manual on the subject of which it treats and is written in a clear and interesting manner, the object being evidently to give routine methods of examination without pretending to enter exhaustively into any of the finer details of analysis of milk and its products. There is a variable expression of opinion of the results obtained by the Local Government Board and other Old Country workers upon the analysis of milk, and the authors make very clear that the standard of purity for milk adopted, or understood to be adopted, by the Chiefs of the Inland Revenue Department Laboratory (that namely of, total solids, 11.25 per cent., fat 2.75 per cent., solids not fat 8.5 per cent.), is evidently founded upon the poorest quality of milk that has been known to be yielded by cows. This certainly is not fair for the purchaser who may reasonably demand that the article supplied to him be of the average quality and not materially below it. The standard recommended in Canada is distinctly higher (fat 3.5 per cent., solids not fat 8.5 per cent., and total solids 12 per cent.). The danger of having a low standard may be regarded as a great temptation, especially among the larger milk contractors, to bring the high quality of the milk down to the level of the standard by means of the addition of water or skimmed milk.

Following upon a very satisfactory consideration of the analysis of milk and milk products is a chapter upon the bacteriology, so short as to be neither the one thing nor the other.

There is a very good and full series of tables of analyses of condensed milks, interesting as condemning a large number of highly advertised condensed milks which as shown by this analysis are clearly not prepared from the whole milk. In this as in the other sections upon butter and cheese there is much information of interest not only to the medical man as such, but to the practitioner interested in the development of one of the most important industries in this country.

J. G. A.

HYPNOTISM AND ITS APPLICATION TO PRACTICAL MEDICINE. By
OTTO GEORGE WETTERSTRAND, M.D., Member of the Society
of Swedish Physicians at Stockholm. Authorised Translation
(from the German Edition) by HENRIK G. PETERSON, M. D.,
Boston, Together with Medical Letters on Hypno-Suggestion, etc.
New York, G. P. Putnam's Sons. Montréal, W. Foster Brown.

We are pleased at the appearance of this standard work in the English language. Of all works on hypnotism it is the most practical,

and any one desirous of being made acquainted with the application of suggestion in practical medicine will find in these pages all that is necessary for clear and comprehensive grasp of the subject. The translation reflects credit on Dr. Petersen.

J. S.

ACROMEGALY. An Essay to which was awarded the Boylston Prize of Harvard University for the year 1898. By GUY HINSDALE, A.M., M.D., Assistant Physician to the Orthopædic Hospital and Infirmary for Nervous Diseases and to the Presbyterian Hospital, Philadelphia. Reprinted from *Medicine*, 1898. Detroit, William M. Warren.

This is the most complete essay in English on Acromegaly. It represents a great amount of painstaking work and will likely remain for many years the most valuable work of reference on this rare but very interesting disease. The illustrations are numerous and well executed.

J. S.

NERVOUS AND MENTAL DISEASES. By ARCHIBALD CHURCH, M.D., Professor of Clinical Neurology and of Mental Diseases and Medical Jurisprudence in the North Western University Medical School, Chicago, and FREDERICK PETERSEN, M.D., Clinical Professor of Mental Diseases in the Womans' Medical College, New York, and Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. With 305 Illustrations. Philadelphia, W. B. Saunders, 1899. Toronto, J. A. Carveth & Co.

This is a work of about 850 pages, 600 of which are devoted to neurology and the remainder, 250, to mental diseases. Dr. Church is the author of the neurological part and Dr. Petersen of the portion devoted to mental diseases. The aim of the writers was to produce a work for the medical student and general practitioner.

This work we feel confident more than fulfils the claims of the authors. The descriptions are very clear, concise, and yet full enough to meet all the wants of those for whom it is primarily intended. The illustrations are numerous and excellent.

J. S.

Society Proceedings.

MONTREAL MEDICO-CHIRURGICAL SOCIETY.

Stated Meeting, May 1st, 1899.

J. M. ELDER, M.D., SECOND VICE-PRESIDENT, IN THE CHAIR.

Janiceps.

Dr. J. A. Macphail showed a case of janiceps which had been sent to him. A report will be published later.

An Obscure Case of Varicocele.

Dr. W. H. SMITH reported a case of varicocele with unusual symptoms. (See page 452 of the June number.)

Dr. A. T. BAZIN said that the question of diagnosis was very difficult to decide. That the mass in the scrotum was due to the distention of the pampiniform plexus of veins there was no doubt, but the points in dispute were the cause and location of the obstruction to the return of the blood.

Neither rupture with effusion nor thrombosis would disappear as rapidly and completely, and it was hard for him to understand how one lax vein could obstruct another lax vein, especially when the surrounding tissue was also lax and yielding. No spasm of the cremaster muscle would produce such marked distention, and even if that were possible the spasm would have been relaxed by the anæsthetic.

The probability of a Littre's hernia being the causative factor had been mentioned, but it had been rarely seen that a hernia had obstructed the venous flow at the internal ring, but it was a mechanical impossibility that obstruction at the internal ring could cause such a tense condition of the veins in the scrotum as was here present without a corresponding engorgement of the same veins from the internal ring down; and this was notably absent.

Again, sufficient constriction to stop the blood flow would cause vomiting, the most common symptom of constriction of peritoneum—be it bowel or omentum—and this was also practically absent.

In his own mind, the speaker was convinced that the constricted point was in the scrotum, one inch below the margin of the pubic bone and immediately above the distended portion of vein, and he would like to hear some theory satisfactorily explaining how the constriction was brought about.

The Prevention and Cure of Tuberculosis.

The adjourned discussion on this subject was continued.

DR. W. F. HAMILTON said:—Among the papers read upon the subject of tuberculosis, that on the early diagnosis of tuberculosis in man is of greatest importance. An early diagnosis of the disease is absolutely necessary if the patient would be cured, and it is of great importance if others not yet infected would be protected.

The incipient stage cannot be considered that in which deficient expansion is present and much less that stage in which even the slightest signs of infiltration are apparent. There are those who urge the making of the diagnosis of incipient tuberculosis in what might be called the pre-expectoration stage. This seems impossible, as infiltration may be well advanced before any sputum is obtained while an attack of simple bronchitis may occur in a tuberculous subject, the sputa giving no evidence of bacilli. Greater stress should be laid upon the pulse and temperature. Observations of changes from the normal in these two signs extending over some weeks, with some failure of strength, in the absence of physical signs should arouse a very strong suspicion of incipient pulmonary tuberculosis. I recollect the stress laid upon this sign by the late Dr. R. L. MacDonnell in speaking of early tuberculosis.

Concerning the use of tuberculin, I am glad that Dr. Lafleur showed how easy of application the test is, how safe to the patient, and withal, in the vast majority of cases, most satisfactory. However, there appears to be cause for exception to be taken to one of Dr. Lafleur's statements. He stated that whether the tuberculous lesion were new or old a properly applied tuberculin test would induce a reaction. Two patients at least have shown no reaction, while their bodies shortly afterwards were found to contain tuberculous deposits. One of these is reported by Northrup in his series of 61 cases, the other was a patient in the Royal Victoria Hospital, who was tested three times and failed to react. He died within a few months of chronic endocarditis and one lung and one kidney showed tuberculous deposits.

In speaking under the head of medicinal treatment one would like to hear more definitely of those drugs which are so largely prescribed in tuberculosis. All are agreed that food and fresh air are the main agents in the treatment of this disease. Nevertheless, an expression of opinion on the use of such agents as creosote, guaiacol, etc., would be of great value to many of the younger men, many of whom are called upon to treat tuberculosis where scarcely any other treatment is possible save that of drugs. Undoubtedly, speaking from my own experience, pure creosote given in increasing doses with glycerine and brandy has been followed by singularly satisfactory results in out-patient cases. One patient has taken upwards of 75 minims daily and for months expressed himself as unable to do without it. I usually prescribe a dose of two and one-half minims for the first few days and gradually increase up to ten or fifteen minims daily. A remarkable tolerance was

observed to this drug and several patients were relieved of gastro-enteric disturbances on beginning the treatment. However, we must admit that this agent does at times alter the colour of the urine and is not well borne by the stomach. A young lady was placed on this treatment on two occasions, and five minim doses thrice daily induced decidedly smoky urine and caused sensation of giddiness and nausea each time.

The early diagnosis is the most important. Fresh air in constant supply and good food in ample quantities, constitute the chief factors in treatment. The selection of a sanatorium is perhaps a point of very minor importance; indeed, it seems to me, that all these branches of the subject are insignificant compared to the *prevention of tuberculosis* and the main object of this society at this time should be the recommendation and adoption of some methods by our municipal and provincial health boards to secure to citizens more protection than at present it possible. It was in 1894 that Dr. Wesley Mills succeeded in carrying in this society a motion against spitting on the floors of street cars. That has, doubtless, been effectual in some degree. In the same year, I think it was, the Provincial Board of Health, recognising how dangerous those houses were in which cases of pulmonary tuberculosis had lived and possibly died, recommended to the City Health Board that disinfection should be adopted. It is reported that an attempt was made to carry out this most important recommendation, but that such resistance was offered that unless an unanimous effort was made on the part of the profession, the city health authorities were powerless to enforce this measure. Needless to say, it has fallen into disuetude.

The isolation of patients with pulmonary tuberculosis is impracticable,—hence the necessity of educating the people in the matter of cleanliness and of adopting again that measure which prevents the spread of the disease by house infection. Those among us who treat patients with pulmonary tuberculosis may do something in preventing the spread of this disease. It has been my practice during the last two years in the out-patient department of the Royal Victoria Hospital to place in the hands of each patient so diseased a card bearing simple instructions concerning the disposal of sputa, sleeping alone, living in the open air, etc.; urging these things in the light of importance to personal health and the health of others.

Before sitting down, Mr. Chairman, I wish again to urge this society to move definitely in the matter of the prevention of this widespread and constantly present disease.

DR. E. A. ROBERTSON. On reviewing the discussion, it appears to me that a great deal more has been said about the cure of tuberculosis than about its prevention. This is strange, for surely it is not the

most important part of the subject. I will, therefore, to-night, say a few words concerning the prevention of tuberculosis.

The disease is spread from man to man and from domestic animals to man. Our attack, then, should have two objective points:—the prevention of contagion of one human being by another, and the extinction of the disease in the lower animals.

The first object would be obtained by enforced notification to local boards of health clothed with proper authority, and by the strict enforcement of their powers; by carrying out the well known rules for the disposal of sputum and the disinfection of houses; by measures looking to the control of the infected persons; and by general measures for the protection of public health, which at present are by no means properly carried out by our local Board of Health.

The second object would necessitate the compulsory examination of cattle by the tuberculin test and the slaughtering of diseased animals. The importance of this measure cannot be overestimated as I will attempt to show by a short account of a campaign against tuberculosis in cattle commenced in 1895 by the State of Vermont

In that year the Board of Cattle Commissioners were given extraordinary powers to deal with disease in cattle, more especially tuberculosis. They were authorized to examine herds, to quarantine them if necessary, and to prevent the sale of milk or flesh of animals thought to be diseased. They were not given the right to test with tuberculin without the owner's consent, but they could bring such pressure to bear in all cases that consent would be seldom or never refused. The State agreed to pay one-half the price of animals killed.

Since February 1st, 1895, 60,000 cattle have been tested, of which number 2,390 were found diseased and killed. Fifty-five thousand dollars were paid in compensation to the owners for the work done. I consider that fifty-five thousand dollars was a very small price to pay for the destruction of 2,390 tuberculous animals with their cumulative powers of infection, and that a similar expenditure of money in this province would prove a very profitable investment.

Some interesting facts were brought out during the testing of the various herds. One especially instructive, as proving the possibility of the skim-milk of creameries being effective, I will relate.

Herds supplying a small creamery were tested. A certain number of cows were found badly diseased. In one herd several calves were found tuberculous, but none of the other animals. These calves had been fed on the skim-milk from the creamery.

We may infer from the condition of the Vermont cattle that the herds in this province, and more especially those in the townships adjacent to Vermont, are no better off. Other speakers have referred to

the difficulties of introducing such radical measures as proposed, and I am not blind to them. But no hard undertaking can be successful without a commencement, and so far, here, not the slightest effort has been made. In New York we have an example of what can be done in preventing the spread of tuberculosis from man to man. Dr. Biggs told us about it last summer. In Vermont we have a demonstration of the ease with which the tuberculin test can be made effectual, and lately in England a movement has been started for the prevention of tuberculosis which should encourage a like effort here. I think that most good would be done by imitating the association lately formed in England, and that the initiative might very properly be taken by this society, which numbers among its members a Senator and Commoner who could help along any necessary legislation.

In conclusion, I would like to draw the attention of the meeting to the frightful mortality from tuberculosis in Montreal. In 1898, 930 persons in Montreal, Westmount, Ste. Cunegonde, and St. Henri, died of the disease. In 1885, small-pox destroyed over 3,000 lives. Tuberculosis every year carries off nearly one-third as many and yet without causing any violent alarm.

Correspondence.

THE LODGE DOCTOR IN RELATION TO MEDICAL ETHICS.

To the Editors of the MONTREAL MEDICAL JOURNAL:—

SIRS,—The fact that your editorial on above subject did not bring a shower of letters throwing cold water on the suggestions therein contained, is a matter of grave importance. Do your readers look at the number in your editorial staff, and fancying the editorial to be the concrete opinion of the lot, hesitate to express antagonistic views? Or, have they become discouraged in their opposition to lodge practice? It does seem to be useless to discuss lodge practice and its demoralising effects. It has been discussed until, as you say, the subject is “threadbare,” and yet lodge doctors are to be found everywhere. It may be stated in passing that the very fact of the subject being threadbare is a proof that the profession in general does not approve of it.

We have had lodge doctors in our midst for a quarter of a century or more, and the ethics of the situation have been carefully considered and conclusions have been arrived at which are as opposed to your views as the north is to the south. You say, and you “feel certain that a majority of the lodge doctors themselves agree with you,—that the doing of lodge practice is degrading to the medical man and the profession,” and yet, according to your interpretation of the code of medical ethics, these men who degrade themselves and the profession are to be treated as men of honour and in every sense our fellow practitioners. You seem to consider it legitimate and perfectly smooth sailing for the lodge doctor to attend any member of the lodge so long as he informs the old family physician—which he seldom does—but you would not allow the family physician to act in the same way. If he is called he cannot take the case and justify himself by informing the lodge doctor of what he is doing. No; “he has no right to see the case except in consultation” with the man who “degrades himself and the profession.” The wishes of the patient are not to be considered. He must refuse to attend, although the “refusal under such circumstances would soon leave him without any practice.” You seem to be a special pleader for the lodge doctor and his methods.

Now, let us look into this lodge practice a little and see what right it has to recognition at our hands.

In the first place it is not confined to young men struggling for a practice. At a meeting of the Ontario Medical Association several

years ago the writer heard lodge practice denounced in scathing terms by a number of doctors, and so unanimous were the opinions against it, that one expected to see a resolution passed pronouncing it "infamous and disgraceful," and therefore amenable to discipline, but suddenly the discussion was quietly dropped. It was whispered about the room that the President of the Association, occupying the chair—a popular and well-to-do doctor of a progressive city—was a "dyed in the wool" lodge doctor, gathering in as many lodges as his genial manner could command. The lodge doctor, as a rule, receives a dollar per year per member for attendance and medicine. Four-fifths of them will admit that this does not pay directly. They admit that they do this work "for the sake of the practice it leads to." They subscribe to a tariff of fees fixing the general practitioner's charge for a single visit—without medicine—at \$2.00, and are glad to avail themselves of this tariff and the assistance of their fellow practitioners when they go into court to sue a stubborn and ungrateful patient; but they will attend and supply medicine for a mere pittance in order to get new patients, or, in other words, to have an opportunity to steal some patients from the family physician. Some of them try to win the family practice by a display of excessive zeal in their attendance on the lodge members. Others plead for charity—confidentially telling the mistress of the house that lodge practice does not pay unless the family practice goes with it, and that they really will be compelled to give up the lodge if the wives and families do not employ them. Others, again, adopt a bolder tone and claim the family practice as a right. Such being some of the methods adopted by the average lodge doctor, why should they not be treated as they deserve?

And now for the remedy. You suggest the drawing up of "some code which will be equitable to the man doing society work and the man who will not; and hint that the scheme may be Utopian. I should say that it is Utopian. You might as well attempt to devise some scheme which will enable sneak thieves and pickpockets to ply their trade without protest from honest men.

The laity have a perfect right to make contracts with cheap doctors, and will continue to do so as long as they can find them. So will they try household remedies, prescribing druggists, faith cures, Christian Scientists, and "Dodd's Pills," and after they have tried any or all of them they should be, and are, at liberty to send for their regular medical attendant.

Whenever one of my regular patients sends for me I invariably go and ask no questions. Whether the patient has been using pink pills, the prescribing druggist, or the lodge doctor, it is all the same to me; I

ignore them all, and I do not agree with you when you say that "this would be throwing open a dangerous door."

I am, Sirs,

Yours very truly,

A GENERAL PRACTITIONER.

NOTE.—The Editors of the JOURNAL disclaim any intention of taking sides in the editorial referred to in "A General Practitioner's" letter. Their object was to state the circumstances in the hope of drawing forth the opinion of the profession on the subject. They are glad to be able to publish the views of "A General Practitioner" and will be equally pleased to hear from the lodge doctor the other side of the question.

THE
Montreal Medical Journal.

A Monthly Record of the Progress of Medical and Surgical Science.

VOL. XXVIII.

JULY, 1899.

No. 7.

TUBERCULOSIS.

The discussion on Tuberculosis at the Montreal Medico-Chirurgical Society was closely followed by a large and appreciative audience. We publish in our last and present numbers the papers forming the basis of the discussion, and the society is to be congratulated on listening to such a series of excellent essays on this all-important theme.

The diagnosis of pulmonary tuberculosis is now established on a firm scientific basis and its recognition need no longer be based almost exclusively on the discovery of certain physical signs at the apex of the lung, signs which, in the early stage of the disease, may be equivocal or absent. The value of thorough and frequent examination of the sputa is now very generally recognised in establishing an early and positive diagnosis, but this measure is unfortunately too often neglected. In tuberculin we have a diagnostic aid of extreme delicacy in doubtful cases. The veterinarians have long used this measure and it is to their example that we owe the revival of this practice in man. Perhaps the chief objection to the test is its extreme delicacy, and a positive reaction due to a quiescent tubercular focus may prove a source of much mental distress to the victim of the experiment. At the same time when duly weighed with other clinical features the value of this test must be regarded as a very high one.

After all that has been said and written on the early diagnosis of pulmonary tuberculosis the unfortunate fact remains that a very large number of patients drift into a comparatively advanced stage of the disease before its true nature is recognised. Even when an early diagnosis is arrived at, most patients are totally unable to avail themselves of the prolonged and expensive treatment necessary for its arrest. In this province no attempt has hitherto been made to care for the consumptive poor. In Germany this problem has been attacked by the workingmen's insurance societies, membership of which is rendered

compulsory by the Government among this class of the community. Sanitaria, supported partly by the working classes, partly by the employers, and partly by the Government, have proved an excellent remedy in the Fatherland. In a democratic country such a solution is more difficult, but it would seem only fair to ask the participators in the benefits to contribute to the cost. The sick benefit societies, assisted by private philanthropy, could surely do something in establishing sanatoria for carefully selected cases of consumption among the working classes. From a purely economic standpoint such institutions would undoubtedly bear good fruit, not only in restoring some of the bread-winners to health, but also in limiting the propagation of the disease through infected individuals.

Since tuberculosis is now universally recognised as an infectious disease, the question arises as to whether it should be treated like other infectious diseases by public health boards and notification made compulsory. Such a measure would enable the health boards to educate affected individuals as to the risk of infecting others, and would emphasise the precepts of the family physician in regard to the precautions to be taken with sputum. Then again the danger of new tenants unknowingly occupying an infected house is a very real one, and one which the public health authorities should be in a position to guard against. There can be no question that after a death from pulmonary tuberculosis the rooms occupied by the invalid should be disinfected, and this could surely be insisted on by the Provincial Board of Health.

In conclusion, the physician must remember that his duty does not end with the diagnosis and treatment of his patient's ailment. He must guard against the infection of healthy individuals, and with this end in view must play his part in teaching the public that the vast majority of tubercular patients are infected by dried sputum.

GESTA MEDICORUM.

"QUICQUID AGUNT MEDICI NOSTRI FARRAGO LIBELLI."

The Semi-Annual Meeting of the College of Physicians and Surgeons of the Province of Quebec, for admission to practice, will be held on July 5th, in the Laval University Building, Montreal.

The fifty-fifth Annual Meeting of the American Medico-Psychological Association was held in New York on May 23rd and succeeding days. It is expected that the meeting will take place in Montreal year after next.

The following appointments have been made on the resident staff of the Montreal General Hospital:—W. L. Barlow and W. W. Lynch, re-appointed. A. H. Gordon, C. T. Fitzgerald, T. G. McNiece, R. A. A.

Shore, W. A. Wilkins and W. A. Cumming were appointed from the graduating class of 1899.

At the Royal Victoria Hospital Dr. Shirres has been appointed Clinical Assistant in Neurology, and Dr. A. Bruere Chief of the Laboratory of Clinical Chemistry. C. B. Keenan, C. H. Brown, C. D. Gillies and H. B. Cushing have been re-appointed to the resident staff, and E. F. Murphy, J. R. O'Brien, F. T. Tooke and T. Turnbull were nominated from the graduating class.

It is our pleasant duty to note the marriages of two of our confreres in the city. Dr. J. C. Webster, the newly appointed Professor of Gynæcology in the University of Chicago, was married on May 26th, in New York, to Miss Alice Lusk. The ceremony took place in All Souls' Church, being conducted by the Rev. Dr. R. Heber Newton. Dr. and Mrs. Webster have sailed for the continent and will carry with them the good wishes of all for a long and happy life.

On June 1st, Dr. D. P. Anderson, Demonstrator of Pathology in McGill University, was united in marriage to Miss Amy Robinson Perry, daughter of the late Dr. H. R. Perry, of Montreal. The ceremony was performed at the residence of the bride's uncle by the Rev. Duncan Anderson, M.A., father of the bridegroom.

Dr. T. G. Roddick, M.P., has returned from an extensive tour through the Western Provinces, where he has been feeling the pulse of the profession on the subject of Dominion Registration. He states that he has met with a gratifying unanimity of opinion throughout British Columbia, Manitoba and the Northwest as to the desirability of such a measure. The only whisper of opposition was in British Columbia, where the profession, though accepting the principle of the measure, had some hesitancy about accepting a retroactive clause. They feared that it might open the door to British practitioners of the cheap diploma stamp. This, no doubt, could be arranged. All the provinces are now pledged to send representatives, with full powers to act, to the meeting of the Canadian Medical Association in Toronto this year.

The Lister Laboratory Club met on Monday, May 8th, in the Molson Pathological Department of McGill University, Dr. C. F. Martin in the chair. The following members were present. Drs. Adami, Finley, Lafleur, Webster, Martin, Nicholls, Morrow, Anderson, Bruere, with Drs. Maude Abbott, R. H. Craig, W. G. Byers, and D. A. Shirres as guests.

Dr. Adami read a paper embodying his work upon the variation of the colon bacillus. In his experiments he found that the diplococcus form which he had found in cases of cirrhosis of the liver was a variant of the bacillus coli. This was present in normal livers and kidneys so he

concluded that one of the functions of these organs was the excretion of bacteria. In experimental animals the colon bacilli injected into the circulation were taken up by the endothelium of the liver capillaries very rapidly, somewhat later by the liver cells, and ultimately were excreted in the bile. He had concluded that the bile normally possessed an inhibitory power towards the colon bacillus.

Dr. W. S. Morrow read a contribution upon the "Propagation of the Venous Pulse," being the result of an arbeit done at Breslau. He had tested the jugular vein and the femoral, There was a characteristic pulse curve for veins comprising a presystolic rise and fall, a systolic rise and a diastolic collapse. The average rate of the venous pulse was one to three metres per second. The pulse was most marked in weak and debilitated animals, the rate of propagation was greatest when the venous blood-pressure was highest. An interesting discussion followed.

Dr. F. G. Finley recorded a case of pneumothorax in which the production of gas was due to the action of the *B. coli* and *B. proteus*. The condition had apparently started in a subphrenic abscess, this was firmly walled off and communicated with the thoracic cavity by a perforation in the diaphragm. The exudate in the pleura was pus mixed with blood.

What promises to be the last appearance of the Montreal Clinical Society took place on May 4th. For several years past the society, which originally seemed to fill a necessary place, has from a variety of causes been in a languishing condition. While the officers were full of enthusiasm the rank and file seemed to have lost interest so that it has been decided to close up the affairs of the society. This was affected in a very pleasing way by the last general meeting taking the form of a supper in Elm Hall, Westmount. The idea was carried out in a very happy manner by Dr. H. M. Church, the treasurer. About 45 members were present including the following: Drs, Wm. H. Drummond, Archibald, Birkett, Blackader, G. A. Brown, E. Brown, Cameron, Carmichael, H. M. Church, C. H. Church, Evans, Finley, Fisk, Fry, Hackett, H. D. Hamilton, W. F. Hamilton, Henderson, Lauterman, Mathewson, MacTaggart, MacPhail, R. Mackenzie, R. T. McKenzie, Morrow, Nicholls, A. Robertson, E. A. Robertson, Ross, Scane, Spier, Shaw, W. G. Stewart, Stirling, Thompson, C. W. Vipond, Wylde, Wilson, White, Westley, and Webster.

Dr. W. F. Hamilton, the president, was in the chair and he was supported by Dr. D. D. MacTaggart, vice-president, G. H. Mathewson, secretary, and Dr. H. M. Church, treasurer. After discussing a happily thought out menu the chairman proposed the first toast "The Queen," which was favoured in the usual enthusiastic way. Dr. G. A. Brown then proposed "The Montreal Clinical Society."

The society, he thought, had filled a place in usefulness, being of

course primarily attended and sustained by the younger men of the profession. He was gratified at the apparent good financial condition of the society, in being able to give the members this pleasant form of meeting. He looked upon the development of a social side of the society as a move in the right direction.

"Our guests," proposed by Dr. W. S. Morrow, was received in a hearty manner. In speaking of the guest of the evening, Dr. W. H. Drummond, he very happily designated him as the "Oliver Wendell Holmes" of Canada. He felt that he voiced the unanimous feelings of the society in saying that they were all proud of their poet physician, and expressed the opinion that he was certain to be a source of further honour to the profession to which he belonged, and he might feel assured of the greatest and lasting support of his confreres in his good work. Dr. Morrow next referred to Dr. Webster's departure, a circumstance they were bound to regret, but at the same time felt that they could certainly offer him their heart-felt congratulation on his new and honourable appointment in Chicago. His friends wished him the best of success in his new field and God speed. The doctor took occasion to express the pleasure the members present felt in welcoming a French member of the profession to their midst, in the person of Dr. Laberge, representing the Civic Hospital. The speaker regretted that the physicians of the East and West End should see so little of each other.

The toast was responded to in a very hearty manner by the guests present. Dr. Drummond, on rising, was received with great applause. He thanked the members for their courtsey in giving him the pleasure of being with them; he was one of the original members of the society; in fact, one of the charter members, and he felt pleased to see its flourishing condition. Dr. Drummond then gave two of his inimitable poems, entitled "Johnny Couteau" and "Little Lac Grenier," which were greatly appreciated.

Dr. Laberge thanked the members for their cordial welcome and regretted that the doctors of the East and Western extremities of the city did not meet more frequently.

Dr. Webster in thanking the members for the pleasure they had given him in having him in their midst on such an occasion, said that he was glad of the opportunity to take a farewell of the younger members of the Profession in Montreal on this his near departure for a new field of labour. He left Montreal with the most sincere regrets, he had, during his two years amongst his confreres received nothing but kindness, and he felt that he had made many fast friends; he might in this regard mention the President of the Society with whom he had spent most of his time since his arrival in Montreal. In speaking of Chicago he mentioned that being perhaps the most Cosmopolitan city in the world, and

having no less than two hundred thousand Canadians he should still hope to hear "God Save the Queen" occasionally, to remind him of the land of his birth. Dr. MacTaggart responded for the Montreal General Hospital and Dr. Archibald for the Royal Victoria.

Our Profession—was ably proposed by Dr. Grant Stewart—who gave it as his opinion that a meeting such as the present evening afforded could only be productive of good. In looking over the work done since the days of Harvey and other early investigators, down to the men of the present day, he felt that every man should be proud of belonging to the Medical Profession. The doctor congratulated Dr. Church, the Hon. Treasurer, on whom had fallen the work organising the evening's entertainment, upon its entire success. The speaker closed by reading an extract from the address on Medicine delivered by Dr. Wm. Osler during the meeting of the British Medical Association in Montreal, in which he set forth the great height attained by the profession in the different fields of scientific research, ending with the statement, that one might well feel proud at the exalted place the Medical Profession had attained in the scientific world of the day.

"The Ladies" proposed of Dr. Nicholls in a very pleasing manner was received with well merited applause.

During the evening a musical and literary programme was presented by Drs. Fry, Scane, R. Mackenzie, H. D. Hamilton, H. M. Church, T. P. Shaw and Lauterman.