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WINNIPEG, JANUARY, 1889.

## AN ADDRESS ON THE MORBID ANATOMY AND PATHOLOGY OF CHRONIC ALCOHOLISM.

DELIVERED AT THE PATHOLOGICAL SOCIETY  
OF LONDON, DECEMBER 4th, 1888.

BY JOSEPH FRANK PAYNE, M. D.,

*Vice-President of the Society; Physician to St. Thomas's Hospital.*

### MORBID CHANGES PRODUCED BY ALCOHOL IN VARIOUS ORGANS.

Since it is obviously impossible to speak of all the organs which may be altered, I shall confine my remarks to a few, especially the liver and the nervous system, taking the morbid changes in these parts as types of the effects produced in the organs generally.

*Effects of Alcoholism as seen in the Liver.*—It is generally recognized that one effect of alcohol is to produce accumulation of fat or steatosis in the liver. This change is produced especially by dilute forms of alcohol, and in those who are well fed. The explanation has already been suggested. Only one question occurs to me respecting this condition: Does it ever pass into cirrhosis? Are there not large livers, with a large amount of fat, which show commencing cirrhosis? Or does the fatty change in some way shield the liver tissues from the more serious and irritative action of the spirit? The accumulation of fat is, so far as it goes, evidence of the destruction of some alcohol; if the explanation given above be correct.

*Cirrhosis of the Liver.*—It would seem as if no pathological process were better

known or explained in a more satisfactory way than this. It is generally accepted that concentrated forms of alcoholic drinks, brought into the stomach, are absorbed into the portal vein, and carried to the liver, where inflammation of the interstitial stroma is set up, by which new fibrous tissue is produced. In consequence of the pressure of this tissue, and its subsequent contraction, the liver cells are compressed and destroyed, and are found in various degrees of degeneration loaded with fat, yellow granules, and so on.

To this explanation I am inclined to demur. I would ask, Is a liver ever found with healthy hepatic cells and an inflamed stroma? In the very earliest stages of cirrhosis are not the cells decidedly degenerated? Is it not more reasonable to suppose that the injurious action of alcohol is exerted simultaneously on both parts of the organ; and that, if so, the parenchymatous elements, being more vulnerable than connective tissue, would suffer first? Dr. Lionel Beale, indeed, urged some years ago that the change is essentially atrophic, not inflammatory.

I am also led to raise the question by consideration of a certain very rare form of degeneration of the liver, which is really, I think, produced by alcohol, though the connection has not been recognized. I mean that called in England acute red atrophy. (In Germany the name "red atrophy" is often given to what we call the nutmeg liver.) It is generally admitted to be nearly allied to the acute yellow atrophy, but differs from it, in other respects besides color. The organ is much reduced in size; the liver cells, as in yellow atrophy, show advanced degeneration and necrosis. Other parts of the organ are of a deep red color, with little or no liver tissue, and consist chiefly of connective tissue and capillaries deeply engorged, inflamed with infiltration of leucocytes, and showing new formation of fibrous tissue. This short description, founded on a paper by Dr. Moxon in our *Transactions*, and on the only case which I have seen, proves, I think, that the same changes are displayed in an acute form, as cirrhosis shows in a chronic

form. The connection with alcohol is perfectly clear, though it was not brought out by Dr. Moxon, nor has it been insisted on in the other cases brought before the Society. We have three cases in all; Dr. Moxon's (vol xxiii), where two brandy bottles were found under the patient's pillow; Dr. Cayley's (vol. xxxiv), in a drinker of spirits; and Dr. Carrington's (vol. xxxvi), which occurred after hard drinking for six weeks. The last I had the opportunity of examining as a member of the Morbid Growths Committee, which gave it the same name as I have done. Dr. Cayley, indeed, suggested that the atrophic process supervened on a chronic cirrhosis; but, taking the three cases together, it would seem that the parenchymatous and interstitial parts of the organ were concurrently affected; the former undergoing, as the usual law is, atrophy and necrosis; the latter showing ordinary inflammation. But if there was any difference in order of time, the parenchyma would be likely to suffer first. I suggest the same explanation for common cirrhosis, and shall return to the same point in speaking of the nervous system.

Another question of interest bearing on cirrhosis is why is it so comparatively rarely found in the bodies of drunkards. Peters found it in four or five cases only out of seventy persons who died from the excessive use of ardent spirits. What other factor is concurrent with alcohol in producing it? Is it ever set up by the action of any liquors other than distilled spirits or strong wine, such as sherry?

#### EFFECTS OF ALCOHOL ON THE NERVOUS SYSTEM.

While the functional disturbances produced by alcohol on the brain are the most familiar evidence of its action, and, when excessive, have long been recognised as the most deleterious of its results, the actual textural changes produced by it have only been demonstrated in comparatively recent times.

The demonstration of organic changes in the nervous system began, as was natural, with the brain, and with observations of alterations visible to the naked eye. I will first speak of changes in the meninges.

The dura mater has been very frequently observed to be thickened, the Pacchionian bodies largely developed. Vascular congestion has been frequently described, but the conditions immediately preceding death and the manner in which the necropsy is made influence so decidedly the amount of blood contained in this part that the observation has not any very great value. More rarely a special change of the dura mater has been described—namely, chronic pachymeningitis, sometimes in the form of the so-called pachymeningitis hæmorrhagica, or hematoma of the dura mater. This curious condition has been explained by Virchow as produced by a combination of exudative inflammation with hæmorrhage. It is certainly sometimes connected with atrophy of the brain. This is among the rarer results of alcoholic poisoning, though it is described by Lancereaux, Greenfield, Magnan, and others as occurring in cases of chronic alcoholism and delirium tremens, and is also found in chronic dementia and other cases in asylums. Without discussing fully the origin of this condition, I will only say that hæmorrhage into the arachnoid cavity is certainly the most important factor, and capable alone of producing the appearances in question, as is shown by such cases as that recorded by Dr. J. W. Ogle, where the immediate cause was injury in an alcoholic person. Hæmorrhagic pachymeningitis has also been produced artificially in dogs by poisoning them with alcohol in even as short a time as four weeks.

The visceral arachnoid and pia mater must necessarily, for purposes of pathology, be considered together. Thickening and opacity are the most constant changes observed, but in certain cases there is much vascular congestion, with small patches of ecchymosis. But the one most frequent appearance in the sub-arachnoid spaces, as well as in the arachnoid cavity, and to a certain extent in the internal cavities of the brain, is excess of serum. This is so marked that those accustomed to post-mortem examinations would generally say that a drunkard's brain is a wet brain.

Now, it is hardly necessary to point out that a similar condition is very gene-

rally met with in the brains of old persons; it is a senile condition. And both in chronic alcoholism and in old age the cause of this accumulation of fluid is the same; namely, it comes from atrophy of the brain substance. The convolutions look small, the sulci deep, and in most cases the pia mater is easily removed.

If it be granted that atrophy of the brain is at least a common result of alcoholism, though not a distinctive one, it yet remains for consideration what the nature of the wasting process is, whether one of simple atrophy, or some special form of degeneration leading to diminution of size.

The answer to this appears to be that there is no special kind of degeneration. The nerve cells are sometimes said to be granular, but in general, no change is described, as at all characteristic of alcoholism. Some observers go so far as to say that the cortical grey matter is very little affected; and one (Wille) refers the degenerative changes almost entirely to the medullary substance. On these points we hope for information from those who have made cerebral pathology a special study.

In a few instances, however, more pronounced changes are met with in the cerebral cortex. The pia mater is adherent to the convolutions, portions of the grey matter being torn off with it. On microscopical examination, patches of degeneration and sclerosis are seen. The inner surface of the ventricles again presents a rough and granular appearance; sometimes with fibrous outgrowths. These are in fact the lesions found in the brain in cases of general paralysis or paralytic dementia.

The relation of chronic alcoholism to general paralysis is a difficult and abstruse question, on which different opinions have been expressed by different observers among those who have had large experience in such diseases. It is only in special practice or special institutions that such experience can be obtained. What I venture to say on this subject is therefore said rather in the way of suggestion.

That so called general paralysis, or paralytic dementia, not now a very uncommon disease, often has for one of its

factors excessive indulgence in alcohol can hardly be disputed. But if I take the statistics of general paralysis on the one hand, I do not find any very large proportion of cases regarded as solely or mainly due to this cause, nor, on the other hand, among the sequelæ of final stages of chronic alcoholism, does general paralysis occupy a conspicuous place. The conclusion appears to be that general paralysis is distinct from chronic alcoholism, and that for the production of the former out of the latter some additional cause is necessary.

Such a cause I believe to be excessive functional strain. The three factors of general paralysis are alcohol, functional strain, and in many cases, congenital incapacity to bear strain; in short, a disproportion between functional activity and power of resistance, especially in the higher cortical centres and the tracts connected with them. I emphasise this suggestion because it appears to confirm the conclusion arrived at on other grounds, that the effects of alcohol on the nervous system, and even on the brain, are independent of its functional effect on the nerve cells, but are those of a tissue poison, acting directly on the protoplasm of various parts. At the same time it remains rather difficult to understand why alcohol so seldom produces inflammation or sclerosis in the brain, the organ which is most susceptible to its physiological effects.

The general subject of the relation of general paralysis to alcohol is one on which I hope we may receive more information from those whose field of observation in asylums has included many cases of each disease.

*Changes in the Spinal Cord.*—I now pass to the changes produced by, or ascribed to, alcohol in the spinal cord. These are not numerous, or frequently observed. Before the period of microscopical examination, the spinal cord was universally said to be healthy in necropsies of alcoholic persons. Of late years a few cases have been recorded in which there was sclerosis, or degeneration of certain tracts, especially the posterior columns, or posterior part of the lateral column (Magnan).



When attention was drawn to the occurrence of paralysis, especially in the form of paraplegia, in chronic alcoholism, it was thought naturally that this would be due to disease of the spinal cord, but subsequent research has not quite confirmed this expectation. More constant morbid changes have been found in nerves. Nevertheless, in a certain number of cases, alterations have been detected in both. When the alcoholism has passed into paralytic dementia, changes in the cord have been found accompanying the changes before described in the brain. At the same time we have cases (I speak from my own experience) of what is thought to be acute myelitis due to excessive drinking. Are there any records of post mortem appearances in such cases?

*Changes in the Peripheral Nerves.*—Although the actual changes produced by alcohol in the nerves have only lately been observed, the symptoms now referred to them have been longer known, though referred originally to a lesion of the spinal cord. Dr. Wilks was, I think, the first in this country to give a clear description of these symptoms under the name of alcoholic paralysis.

Here I must venture to depart a little from the plan laid down, and say a word or two about the clinical aspect of the nervous disease, especially as it is not yet universally recognised by the profession.

The earliest symptoms are disturbances of sensation, and, in the first place, hyperæsthesia. There may be peculiar sensation (paræsthesia), such as numbness, tingling, or feeling of pins and needles, or burning, and sensations of boring and stretching. There may be actual pain, but not usually continuous. Later on, all these disturbances give place to anæsthesia, which is often observed to be present in particular areas. Difficulty in locating sensation and retardation in the transmission of sensation have also been described. All these symptoms are evidently referable to cutaneous nerves, but the deeper nerve trunks and muscles are often tender on pressure. The special senses are very rarely affected. If we consider the phenomena relating to muscles, we find a very prominent symp-

tom, and usually an early one, though sometimes absent, is inco-ordination and loss of muscular sense. The knee-jerk is lost at an early stage, and Dr. Gowers refers this phenomenon, apparently with justice, to the loss of the muscular sense.

All these phenomena constitute the condition of alcoholic ataxia, which may come on before there is actual paralysis of motion, and may remain, as I can state from personal observation, when actual paralysis, once present, has passed away, though it is probably always accompanied by muscular weakness. It is distinguished from *tabes dorsalis*, or what is called locomotor ataxia, by several characters, especially by absence of all symptoms connected with the pupil of the eye or with the sphincters. Next, if the affection continue and become more severe, we have the stage of actual motor paralysis. In this there will be entire loss of motor power in the muscles, sometimes quite local, sometimes in all four limbs. The paralysed muscles soon lose faradic irritability, and become impaired in galvanic irritability.

Now I think it is quite clear that the symptoms, of which the above is a bare outline, might be referred to injury of peripheral nerves.

Take first the case of the cutaneous nerves, the function of which is mainly efferent or sensory. The first result of slight injury to a nervous structure, if it do not pass a certain degree of intensity, is to cause its substance to be more easily decomposed—that is, to produce an apparent, or, at least, temporary, exaltation of function, which, in a sensory organ, is expressed as hyperæsthesia. A continuance or higher degree of the same injury will produce total loss of conducting power or anæsthesia. Whether this injury affects nerve endings, or nerve trunks, or both, is a question not yet entirely decided. It is evident that paræsthesia or irregular sensations may also result from injury to sensory nerves.

Now let us consider the case of the muscular nerves (a term which I prefer to that of motor nerves, at least for the present purpose). These nerves have a twofold conducting power: one efferent,

transmitting motor impulses; another afferent, transmitting the muscular sense. The sensory or afferent function is assigned to special fibres, which are said to have special origin. This statement my knowledge is quite inadequate to enable me either to confirm or reject; but for the present purpose it is enough that there are fibres having this function. It would seem as if these fibres were effected by a slighter form of injury than that which is necessary to cause actual motor paralysis. At all events, an injury of these fibres would produce all the symptoms of ataxia, and an injury of the efferent motor fibres would cause paralysis.

Certain other symptoms, which sometimes complicate alcoholic paralysis, are explainable by similar injury of other nerves. One is acceleration of the pulse. This is very notable in many cases. In one of my own, which ended in recovery, the pulse was for a long time not less than 140, independently of occasional fever, and still more rapid pulses have been observed. In a case of a confirmed drinker, whose pulse was usually about 180, and who died of thrombosis of the portal and mesenteric veins, with hardened liver, I found after death nothing to account for the rapid action of the heart. It is clear that a slight degree of injury to the vagus nerve would, in the absence of other causes, be sufficient to account for this acceleration of the heart; but when this observation was made the connection was not thought of. Paralysis of the diaphragm, from affection of the phrenic nerve, may also occur.

It would not be enough to show that nerve changes would account for these symptoms. It must be shown that no other cause accounts for them, and that the nerve changes actually exist. The only other conceivable cause of all the symptoms described would be an extensive lesion of the spinal cord, affecting both motor and sensory tracts. Such a lesion is not known to occur in these cases, and has in many cases been proved not to be present. Moreover, the supposed nerve lesions have been, in many instances, found in the mixed nerves, including both cutaneous and muscle nerves. In one instance, at least, similar changes

have been detected in the trunk of the vagus (Finlay) when the pulse was 160. It is to Lancereaux that the credit belongs both of suggesting this explanation and of establishing its truth.

I will venture to speak of one point in the pathology of what is called neuritis, and this with reference to other forms of the same lesion, such as diphtheritic and the various toxic forms.

The changes described in the nerves thus affected come under the heads parenchymatous and interstitial. The first include cloudy or granular appearance of the nerve fibres, segmentation of the myeline and collection of it in round and oval masses, sometimes absence of the axis-cylinder, and other similar changes; in fact all the evidence of degeneration, ending in necrosis.

The interstitial changes are seen in the perineurium or endoneurium, either diffused, or mainly external. These tissues may show an increase in the number of nuclei, or infiltration with leucocytes, and are generally thickened. In some cases actual increase of connective tissue has been described. These changes are what are usually described as inflammation leading to hyperplasia.

Very generally, both these changes are found together, but sometimes one group of changes predominates, sometimes the other; and thus the lesion is sometimes described as degeneration, sometimes as inflammation, and there has been a sort of controversy as to by which name it should be called, and which should be regarded as the original or primary change. I would submit that the parenchymatous and interstitial lesions are both produced by the direct action of alcohol, and illustrate the general law that when a toxic or injurious agent affects a mixed organ of the body, it is likely to produce degeneration or necrosis of the parenchymatous elements (nerve, muscle-fibre, epithelium), and what is generally called inflammation (either of the constructive or suppurative form) in the connective tissue, just as in the liver. This does not exclude the possibility of there being a parenchymatous neuritis, such as has been observed in experiments on animals by Ranvier and others; in which there would be formation

of new nerve fibres. But as the nerves have never been removed during life from cases recovering, but only after death from fatal cases, in which there was presumably no repair, the nerve fibres show pure degeneration or necrosis.

It is also to be remembered that the change found in certain parts of the nerves may be a secondary degeneration, caused by interruption of the nervous currents by lesion of the nerve at another point. But when interstitial change and nerve degeneration are present, it is not necessary to suppose that the nerve fibres suffer secondarily, being compressed by the hyperplastic connective tissue. On the contrary, there are instances in which the nerve degeneration must be the primary change, and the connective tissue change a consequence of it. For instance, this must be the case in the so-called secondary degeneration of conducting tracts in the spinal cord or nerves, in consequence of injury to the ganglionic tissue with which they are connected. It is clear that the break of communication will at first affect only the nerve fibres, and not the connective tissue surrounding them. Changes in this tissue, that is to say, sclerosis, perineuritis, or interstitial neuritis, must therefore be a consequence of the nerve atrophy. How this leads to connective tissue proliferation is a difficult question. But I have elsewhere attempted to show that it may be partly a consequence of the diminished resistance which favors overgrowth of the tissue which remains; and secondly, that when the nerve fibres are dead, the connective tissue deals with them as with a foreign body. It tends to form a barrier of fibrous tissue around them as if to encapsulate them.

In ordinary neuritis we could only prove which was the initial stage of the disease by examining specimens at different stages, which has not been done, so far as I know. Hence, since we do not know the necessary order of the changes, it is more reasonable, on the whole, to regard them as simultaneous results of the action of alcohol, and to speak of the whole process as alcoholic neuritis.

I can only just allude to the remarkable fact that similar nerve changes have been demonstrated in chronic arsenic-poisoning,

in lead-poisoning, in paralysis from bisulphide of carbon, and in the disease called kakke, while there is great reason to think that the nerve changes of diphtheria and other specific diseases are due to the same morbid process. All these will be forms of multiple peripheral neuritis.

*Changes in Other Organs.*—I have chosen the liver and the nervous system as typical instances of the injurious effects of alcohol on tissues; and there would be no time to speak of other organs in the same way. I can only, therefore, briefly mention what appear to be the most important points.

With regard to diseases of the kidney, one cannot but feel that the connection of different forms of Bright's disease with drinking requires further elucidation. The general belief in the profession certainly is, or was, that drinking to excess is a rather frequent cause of this disease. But Dr. Dickinson's observations and statistics tell so strongly against this view that further observations are needed if it is to be maintained.

The relations of alcoholism to disease of the generative organs is a very interesting though little studied subject. One of the oldest beliefs respecting the effects of excessive drinking is that such habits diminish fertility in both sexes, but especially in the male. The Rev. Stephen Hales, in the eighteenth century, even sought to show that the natural increase of the population of London was seriously lessened by the use of distilled spirits. The number of christenings (taken as corresponding to births) in London fell off from 19,370 in 1724 to an average of 14,320 in the three years preceding 1750. Whether these statistics rest on a sound basis I cannot say, but statements to the same effect have often been made. It is also stated that procreation, when one or both parents are inebriated, results in the birth of idiotic or deformed children, and Dr. Langdon Down has brought some such cases before the Society. It has never been shown whether this depends on any organic change in the testicles or the semen, or on the temporary inebriation. A few observations have been made on the condition of the male generative organs by Lancereaux and others. Corres-

ponding conditions in the female sex would, there is every reason to believe, be equally injurious to the offspring. Little positive information has, however, been collected as to the state of the generative organs in female drinkers. Dr. Matthews Duncan's able paper on this subject in the *Edinburgh Medical Journal*, April, 1888, probably contains all that there is at present to say.

The organs of respirations appear, from clinical observation, to be affected by alcoholism. Certainly we often meet with laryngeal and bronchial catarrhs which are chronic and obstinate, and with great probability referred to the direct action of alcohol. In connection with this it may be worth while to recall the fact that alcohol is actually excreted by the lungs probably partly in an oxidised state, and may therefore have a directly toxic action. Further, arsenic, if given in long courses, seems to have a tendency to produce bronchial catarrh; and cantharidinae injected experimentally under the skin of rabbits has produced acute laryngitis. *Post-mortem* observations have shown nothing definite on this point.

With regard to the influence of alcohol on the production of tubercle, the utmost divergence, and indeed contradictory opposition, of opinion prevails. Huss found tubercular phthisis to be rare in drunkards, and that has been the general conclusion drawn from *post-mortem* observations. It has even been thought that drinking freely checks the progress of phthisis, but of this I can find little evidence. On the other hand, the more general impression is that alcoholism is a frequent cause of consumption. On this disputed point we must appeal to the methodised experience of those who have special opportunities of observation. The only new fact in the discussion is, I think, the undoubted frequency of tubercular diseases in the subjects of alcoholic paralysis.

Passing over many important and interesting subjects, I will only say a word or two on the relation of chronic alcoholism to the skin. Most of us are familiar with the kind of skin generally associated with advanced alcoholism—soft, smooth, satiny, generally

pale, and sometimes waxy-looking. It appears to depend partly upon accumulation of adipose tissue under the skin, partly, perhaps, upon wasting of the skin itself, or of the epidermis. It is very much like the seulle condition of skin. It is stated by Lancereaux to accompany degeneration of the liver, or rather steatosis. I am sorry, however, I have no specimens of skin from alcoholic subjects. The association of chronic hyperæmia of the nose or other parts of the face, and of acne rosacea with drinking habits, is too well known to need mention, except the expression of a hint that the frequency of such association has been exaggerated. There is only one other skin affection, so far as I know, which has been definitely attributed to the effect of drinking. It is a peculiar brown pigmentation, mottled and variegated, which has been described as occurring in alcoholic persons. It is singular that we had one case at St. Thomas's Hospital of a patient dying of cirrhosis of the liver combined with tuberculosis, in whom a piebald mottled appearance is described as having been present on the genitals. It appeared from the description to have been like the so-called leucoderma, consisting of white patches in the midst of skin showing excess of pigment; but it would be premature, I think, to conclude from a few coincidences that it was produced by alcoholism, since a similar condition certainly often arises without any such cause.

Eczema, psoriasis, and various other diseases have been ascribed, with little ground, to the effects of drinking. The only fact I believe to be established is that drinking habits make such diseases inveterate, and sometimes quite incurable. I have seen eczema in an alcoholic subject pass into general exfoliative dermatitis, on which treatment made absolutely no impression.—*British Medical Journal*.

A ZENANA hospital was opened at Quetta, in Beloochistan, India, on November 2nd, a fresh result of Lady Dufferin's labours.

### FLUSHING THE PERITONEUM.

The practice of washing out the peritoneal cavity in abdominal sections where much blood, serum, or other fluid or semifluid matter has been effused, is a most important innovation in modern surgery. Certain well known and distinguished British specialists are zealous advocates of this system of flushing the peritoneum, which they have practised with great success. A full stream of water at blood-heat, poured into the peritoneal cavity, detaches clots, etc., which sponges may fail to remove, counteracts the effects of chill caused by the opening up of the great serous cavity, and likewise acts as a hæmostatic. The advocates of flushing insist on the necessity of subsequent drainage.

The good results of flushing the peritoneum, according to the testimony of experts, have tempted others to try the practice, not always with similar success. Indeed, a distinguished French surgeon recently read before the Paris Obstetrical Society an important paper on the danger of flushing the peritoneum during abdominal section. In one case the patient was placed in great peril. In a second case death occurred. A patient, whose age is not stated in the report published in the *Journal de Médecine de Paris*, suffered from suppurating oophoritis on the left side, and double salpingitis. At the operation the appendages could not be removed until intimate adhesions had been broken down. The peritoneum was flushed with "hot distilled water," and during the process profound syncope, with suspension of respiration, took place. Artificial respiration was carried on at first in vain, and a tracheotomy wound was made in the integuments of the neck, when immediately spontaneous inspirations occurred, and the patient thenceforward did well. In the fatal case the patient was a single woman, aged 28. She took chloroform badly, the excited stage was long, and she readily came to, though plenty of chloroform, out of a "new bottle," was administered on a piece of lint. A large cyst had to be shelled out of the broad ligament. As much blood was effused, M. Polaillon determined to

flush the peritoneum. He employed distilled water, previously boiled, and containing one part of carbolic acid to a hundred. The water was poured into the pelvic cavity through a wide glass cannula, at a temperature of about 90° F. After the flushing had been carried on for about three minutes, respiration became rapid, then grew feeble and ceased; the face became blue. The heart continued to beat regularly. The alarming symptoms began at a quarter past ten o'clock. Artificial respiration was continued till eleven. Then a few feeble inspirations began, and continued for a quarter of an hour; the pupils were then half contracted. The heart beat regularly and quickly. The patient continued unconscious. M. Polaillon immediately closed the abdominal wound, fixing the broad pseudo-pedicle outside. Notwithstanding inhalations of pure oxygen, friction, injections of ether, electricity applied to the level of the attachments of the diaphragm, and other stimulant measures, spontaneous respiration could not be permanently maintained. Once more artificial respiration was tried. Phlebotomy only resulted in the escape of a few drops of dark blood from the left arm. Gradually the heart's action became more and more feeble, the face grew pale, flatus escaped from the anus, and the pupils dilated. A few minutes before noon the patient was evidently dead. The patient had been thirty five minutes under chloroform. About one ounce and a half of the anæsthetic was used up, but not nearly that amount could have been actually inhaled.

M. Polaillon observed that this death was not only caused by chloroform; the flushing of the peritoneum must also bear part of the blame. He noted severe syncope in two cases at the moment when he injected very hot water into the abdominal cavity in order to wash coils of intestine and the peritoneum in general. Respiration was maintained in both these cases. In the instance above described at length the coincidence of the flushing with the cessation of respiration was equally marked. He specified that he at first poured about half a gallon of hot carbolic water into the pelvis, and, as the water came out strongly blood-stained to the last, he pour-

ed in more water, accidentally hotter than the first supply. The pelvis being full, the water reached the upper part of the abdominal cavity. It was at this moment respiration ceased. M. Polaiillon believed that the stimulus of the hot water touching the diaphragm or the solar plexus caused, by reflex action, the arrest of respiration and syncope. He likened the accident to the effects of a contusion in the epigastric region. This arrest of respiration was liable, as in this case, to remain permanent in a subject under chloroform, which already weakened the respiratory influence of the medulla. He advocated the placing of the lower part of the patient in a lower position than the upper, so as to prevent the water used in flushing from running towards the diaphragm. M. Polaiillon also maintained that the water should never be over 99°. Some authorities may think that the presence of carbolic acid increases the danger of flushing. M. Polaiillon's case decidedly deserves the serious consideration of all operators, now that the practice of flushing is becoming more and more general.—*British Medical Journal*.

#### AESOLUTE SIGN OF DEATH.

The debate which took place at the Medical Society of London on Dr. B. W. Richardson's paper on the absolute signs of death reopened discussion of a subject which never seems to weary either the medical or the public attention. There is something so appalling, even to the strongest mind and the bravest heart, in the idea of being buried alive, that so long as such a thing is possible there will be a continuous debate on the topic in all circles of the educated community. Dr. Richardson's essay differed from what has usually been said on the matter in the fact that it enumerated from a long experience the circumstances under which the practitioner may be called to determine whether or not life is extinct, as well as described the immediate tests that ought to be brought into play in order to prove that death is absolute. No less than ten distinct circumstances were assigned as being advanced by relatives of deceased persons on the question of suspended life, to which

was added the expressed wish or direction of a person during his or her own life that a skilled examination should be carried out after assumed death, in order to prevent the possibility of interment while yet a spark of life should remain. With most of these circumstances calling for inquiry the profession is more or less familiar, but two were specified that are not generally recognized—namely, simulated death from narcotism caused by chloral, and the same simulation from what the author designated traumatic catalepsy, and the cataleptic insensibility from the shock of an electric discharge, or from lightning stroke, or from concussion. Two cases were cited illustrative of these conditions, both of which might be rendered in the text-books as new additions to the list of doubtful evidences of actual dissolution. Of the many tests or proofs of death enumerated by the author, there are also two that should be recorded not only as new, but as being exceedingly simple and at the same time strictly physiological in character. The first of these, which has originated with the reader of the paper, and which Sir William MacCormac, the President, commented on so favorably, is the wrist test, or that of putting a splint on the fore part of the wrist so as not to impede any current of blood which may be making its way through the radial and ulnar arteries, and then tying a fillet firmly round the wrist so as to compress the veins firmly on the back of the wrist. If the veins of the hand, under this test, show no sign of filling, the absence of any vital circulation may be declared certain; while, if they fill, the fact of a certain "low pressure" circulation may be assumed to be present, and therewith an indication of mere suspended life. The second test, new probably to most readers, is that to which the name of Montiverdi was attached as its discoverer, and which is called the ammonia hypodermic test. In using this test the operator injects one hypodermic syringe of strong solution of ammonia under the skin of the arm or some other convenient portion of the body. If the body be not dead, if there be the faintest circulation, the ammonia will produce on the skin, over the point where it was injected, a bright-red patch, on the surface

of which raised red spots will appear; but if there be absolute death, there will be produced a brown dark blotch, which is definitely conclusive against any possible vitality. One addendum to the indication of putrefaction as a proof of death is also worthy of note. Putrefaction may be delayed by two causes: by coldness of the surrounding air, and by the introduction into the body before death of an antiseptic substance like alcohol; or by a combination of these two causes. In such instances it is the proper practice to force on, so to speak, the putrefactive change by raising the temperature of the room in which the body lies to summer heat, and by adding moisture to the air. This proceeding plays a double function: it affords the body the best chance of restoration if by chance the life is not extinct; and it gives the strongest evidence of death in the quick putrefaction it excites if death has veritably occurred. We noticed in the discussion which followed the paper that Dr. Althaus—whose account of the numbers of persons believed to be buried alive created a very serious impression—gave valuable testimony on the electrical tests of death, a point to which he thought the author had not paid sufficient attention. We noticed also that a question raised by Dr. Routh, whether the nearest relative of a dead person or the executor had the legal control over the remains, was not satisfactorily settled. But this anomaly all were agreed upon—namely, that the dead person himself was left out of the disposition, not simply because he was dead and helpless, but because the law would give no effect to anything he might have desired before death as to what should become of his remains.—*The Lancet.*

#### PRIMARY CARCINOMA OF THE TONSIL—EXTERNAL PHARYNGECTOMY—RECOVERY.

BY GEO. R. FOWLER, M.D.

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Cancerous neoplasm of the tonsils, as a primary disease, is, according to Castel, more common than is usually supposed. In a discussion upon this subject at the

London Pathological Society in 1883, the opinions of various surgeons were found to support this view. Butlin, F. Semon, R. Williams, and others, hold that, while malignant disease of these organs is not frequently met with, yet its occurrence as a primary disease is rather more common than as a secondary affection. A notable exception to those who hold this view, however, is to be met with in Miculicz, who claims that cancer of the tonsil is generally, or at least more frequently, met with as secondary to malignant disease elsewhere. In this connection, the following case is of interest:—

Mrs. J. E. L., aged 67, kindly referred to me by my friend, Dr. A. Ross Matheson, was admitted to my service at St. Mary's Hospital, January 21, 1886, with the following history: Two of her cousins had died of cancer of the breast. Nine months prior to admission, she noticed an enlargement of the left tonsil, which interfered with deglutition. The trouble progressively increased, and finally Dr. Matheson removed a portion of the growth for microscopical examination; the result was not satisfactory, but a suspicion as to malignancy was aroused, and her medical adviser strongly urged upon her the necessity for its immediate removal. This advice, however, she, for several months, declined.

Upon admission a rather lobulated and somewhat movable growth was found occupying the site of the left tonsil, of about the size of an English walnut. There was also a lymphatic enlargement beneath the posterior border of the sternomastoid muscle. She complained of pain about the angle of the jaw, and, in fact, the entire left facial region. This was aggravated by swallowing, the latter being accomplished only with the greatest difficulty.

The following operation was undertaken for her relief on January 21, 1886—*anæsthetic, ether*:—The patient's head was well extended and turned to the right, being supported in that position by means of a small sand pillow. An incision, commencing just below the lobe of the left ear, was carried downwards and forwards along the anterior border of the sternomastoid muscle to a point about

two cm. below the level of the hyoid bone. A second incision, commencing about half way between the angle of the inferior maxilla and the symphysis menti was carried directly downwards and backwards to meet the lower angle of the first incision. A triangularly shaped flap was thus marked out, its base and point of attachment being represented by a line drawn across the angle of the jaw, from the lobe of the ear to the point of the chin, while its apex rested slightly below the greater cornua of the hyoid bone. This flap was dissected up and included the tissues down to the sheaths of the muscles. The external jugular vein was divided between two ligatures. The facial and lingual arteries were divided and secured. The flap being well retracted, the following parts were brought into view in the space thus exposed: The angle of the jaw, portions of the parotid and submaxillary glands, the stylo-hyoid muscle, and beneath this the posterior belly of the digastric; a portion of the anterior belly of the last named, together with omo-hyoid muscle. Just below the angle of the jaw a small portion of the hyo-glossus was visible. The working space thus obtained was considerably augmented by severing the hyoid attachment of the stylo-hyoid, and, with blunt retractors, dragging this muscle, as well as the posterior belly of the digastric and the important vessels and nerves of this portion of the anterior triangular space, well downwards and backwards. In a similar manner the mylo-hyoid was retracted anteriorly. By passing the fore and middle fingers of the left hand into the patient's pharynx, and pressing the diseased tonsil well down and in an outward direction, the tumor was rendered quite prominent externally beneath the angle of the jaw. With the fingers still pressing upon the tumor so as to bring it prominently into view, where it was held by a stout ligature in the hands of an assistant, a circular incision was made with the thermo-cautery through the hyo-glossus, superior constrictor, and the mucous membrane, so as to include the outer base of the growth, and the diseased area surrounding the same. In this manner complete extirpation of the organ was accom-

plished, the final stage being completed without the loss of a single drop of blood.

The incision along the anterior edge of the sterno-mastoid was now carried across that muscle to its posterior border so as to include the lymphatic enlargement before mentioned, and this was literally shaved off from the sheath of the common carotid artery. The mass was found to include a series of lymphatic glands nearly eight cm. long. Considerable time was occupied with this step of the operation, owing to the fact that the capsules of these glands were intimately adherent to the sheath of the carotid artery.

Following the usual antiseptic irrigation of the wound, the parts were replaced. The stylo-hyoid muscle was sutured with catgut at the point where it had been divided; a drainage tube was placed in position to drain the parts behind the angle of the jaw, the cavity from which the lymphatic glands were removed being drained by strands of catgut. Sutures of the latter material served to secure coaptation of the wound edges after adjustment of the flap.

On January 25th, it is noted on the hospital record that the pulse and temperature were normal, and that she swallowed with much less difficulty.

On January 28th the dressings were removed for the first time. There was a remarkably slight discharge, considering the fact that the wound communicated with the cavity of the mouth. She still complained of pain in the left ear and left side of face, which, however, was readily relieved by anodynes. The greater portion of the wound has healed by first intention.

On January 31st it is noted that she could masticate and swallow solid food. Up to this time she had been kept on liquid diet.

On February 2nd she sat up. The wound communicating with the cavity of the mouth was found to be almost closed on the 4th. The track of the drainage tube was necessarily slow in closing, but this was finally accomplished, and she was discharged from the hospital cured on February 18th.

Eight months afterward I saw this



patient with Dr. Matheson. The tonsillar region itself still remained free from return of the disease, but she was suffering from a secondary involvement of the parotid of the *right* side, as well as the left, together with undoubted symptoms of gastric cancer, from which latter she finally perished.

With reference to the early history of this case, attention may be called to the following diagnostic points: 1st. The patient's age. At her time of life, hypertrophy of the tonsil, pure and simple, is a rare affection. 2nd. The growth occurred on one side only, the other organ showing not the slightest increase in size. This is in marked contrast to the usual course of simple tonsillar hypertrophy. 3rd. The early occurrence of pain, cutting in character and radiating over the left side of the head and neck. 4th. The peculiar cartilaginous character of the growth. When Dr. Matheson attempted its removal, he found it impossible, although the instrument employed was a strong and sharp Matthieu tonsilotome, to remove more than a very thin slice from its most superficial portion. These facts awakened a suspicion as to its true character before the lymphatic mass made its appearance. This latter occurrence seemed to render this suspicion a positive certainty.

The operation of external, or lateral pharyngotomy, as it is sometimes termed, although seemingly formidable from the important structures involved in the dissection, is, like that for ligature of the external carotid and lingual artery, comparatively easy of execution. The preliminary incisions vary considerably, according to the size of the neoplasm and extent of the morbid process in its invasion of neighboring tissues.

Bilroth, followed by Kuester, preferred the following method:—The incision, eight or nine cm. in length, is made along the anterior border of the sterno-mastoid, and is similar to the one employed in the ligature of the carotid artery. The skin, platysma myoides and superficial fascia being divided, the sterno-mastoid is brought into view and its sheath opened. The muscle is then freed from its attachment at its lower part. Should the case

require a low operation, the omohyoid is divided, as well as the upper part of the middle cervical fascia, and the carotid vessels are exposed to view. At the bottom of the space thus secured and close to the greater cornua of the hyoid bone are to be seen the superior thyroid, the lingual and facial arteries. If necessary, these vessels, as well as the venous trunks encountered, may be divided between two ligatures. The loop of the hypoglossal nerve is also divided. By retracting the parts with blunt retractors, considerable room will be gained, and the pharynx exposed to view, occupying the bottom of the wound. With a sound in the pharynx, or the fingers as a guide, placed in the same situation, the pharynx may be opened to the extent of the space uncovered by the external dissection. By means of the incision above described, either the laryngeal or the buccal portion of the pharynx may be reached.

Wheeler operated by means of what may be termed a typical inferior pharyngotomy. His incision extended only from the greater cornua of the hyoid bone, to the thyroid cartilage. The division of the omohyoid and corresponding fascia is here necessary. The bifurcation of the carotid lies at the upper part of such a wound. The ligature of the superior thyroid artery alone will be necessary in such an incision, which will, however, be rarely sufficient for the purposes of an operation for the removal of a tonsillar tumor.

The typical superior pharyngotomy of Gussenbauer, according to Bergmann, is performed as follows: An incision is made from the ear to the greater cornua of the hyoid bone. The posterior belly of the digastric is sought and identified, and the parts beneath and back of it are divided well into the submaxillary region. C. Weil, as well as Miculicz, prefer, in superior pharyngotomy, to make the incision seven to eight cm. in length behind the ascending ramus of the inferior maxillary bone, including the parotid gland if necessary; they are careful to keep the facial nerve intact. The incision is then carried along the lower border of the horizontal portion of the bone, and a double ligature is placed upon the facial and

lingual arteries, and the vessels divided between. In this incision the operator is at once brought to a level with the tonsil.

The inferior operation, however, is really the only true *pharyngotomy*, inasmuch as it is only possible to incise the pharyngeal wall in this limited incision. On the other hand, the superior operation is only resorted to for the extirpation of neoplasms, with more or less removal of the pharynx itself, and thus becomes a true *pharyngectomy* (C. Weil, Heine, Gussenbauer, Ch. Monod). It has been customary heretofore to speak of the operation for gaining entrance to the pharynx by external incision as a "pharyngotomy," although, strictly speaking, this name is not applicable to the operative procedure under consideration.

Langebeck, in 1879, employed an incision for opening the pharynx before extirpating a portion of it, as follows: He begins at a point midway between the symphysis menti and the angle of the jaw. This incision, descending, crosses the greater cornua of the hyoid bone, and, following the direction of the sternothyroid muscle to the level of the thyroid cartilage, is continued even lower down if necessary. The superficial veins being divided between two ligatures, the superficial fascia is opened, and the omohyoid and middle fascia are incised. At the level of the hyoid bone a deeper incision is made, and the lingual and superior thyroid arteries sought for and tied, as well as the fascial vein and thyro-linguo-fascial venous trunk. The hypoglossal nerve need not be disturbed, but the two branches of the superior laryngeal nerve are always divided. This space is still further increased by freeing the hyoid attachment of the digastric and stylo-hyoid muscles. The pharynx may now be incised to the extent of the part exposed.

In true *pharyngectomy*, or the operation for the removal of neoplasms from the buccal and tonsillar regions, the procedure may be executed with or without section of the inferior maxillary bone. That without bony section is the one credited by Bergmann to Nussenbauer. Such an operation was performed by Heine in 1875, and published by C. Weil in 1881.

With the view of gaining more room for the extirpation of a cancerous growth implicating the pharynx, as well as to more successfully control hæmorrhage, Bilroth, in 1861, divided the inferior maxilla. Since then surgeons have adopted, when necessary, this expedient in the removal of tonsillar tumors. In some instances it has only been necessary to separate the divided portions of the bone, while in others a portion of the angle of the jaw has been resected. Miculicz makes a subperiosteal resection of the jaw at a point opposite the tonsil, removing a portion of the bone, and thus procures a large working space.

To Cheever, of Boston, (1869), however, belongs the credit of having first systematized the operation of superior pharyngectomy with bony section, for the removal of tonsillar tumors. This surgeon now makes an incision upon the inferior border of the lower jaw, and having removed any implicated glands he saws through the inferior maxilla in front of the masseter. After section of the hyoid muscles, the bony fragments are pushed apart, and the fingers of an assistant, passed through the mouth into the pharynx, crowds the tonsil outwards, thus rendering ablation of the neoplasm easy (1878). In his earlier operations, Cheever made a second incision along the anterior border of the sterno-mastoid, which bisected the one above described at its middle. Hueter, in commenting upon Cheever's operation, relates that in 1865, he himself excised the tonsil after resection of the inferior maxilla, as did also Langebeck. These, however, were not heretofore published, although Watson, in 1869, also operated in a similar manner. To Cheever, therefore, is accorded the honor of having introduced the method into practice.

Kuester, more recently, has published two cases of cancer of the cheek and lateral walls of the pharynx. He reached the neoplasms by making an incision commencing at the angle of the mouth and carried obliquely in front of the insertion of the masseter muscle, and thence to the sterno-mastoid. By sawing through the bone in the same direction, he succeeded in extirpating the neoplasm through the breach made by separating the bony fragments.

Langenbeck has devised a method which has for its object the removal, at will, of tumors from the tonsillar region, as well as neoplasms from the lower pharynx and upper part of the œsophagus. It consists essentially in first dividing the entire thickness of the cheek in a direction obliquely downwards and backwards from the lateral commissure to the lower border of the jaw, in front of the insertion of the masseter muscle; thence the incision curves backwards under the jaw to a level with the sterno mastoid. Layer after layer is divided in this region, extirpating, in the meantime, any involved glandular structures, and tying the lingual artery. The inferior maxilla is then sawn through obliquely in the direction of the cheek incision, and the bony fragments are separated. This method has likewise been employed by Genzmer; Bergmann also expresses his preference for it.

M. Polaillon advises the following method: An incision is carried along the edge of the sterno-mastoid, from the lobe of the ear to the level of the thyroid cartilage. This allows the freeing of the angle of the jaw and removal of any of the affected glands, as well as ligature of the external carotid artery. In one of his own cases, this surgeon thus tied the common carotid. A second incision, involving the entire thickness of the cheek, is made to join the first at its upper angle. The resulting triangular flap is rapidly detached from the inferior maxilla and depressed upon the neck. Section of the inferior maxilla may be made, if it be found necessary, and a portion removed. Access is thus readily gained to the pharynx and fauces.

According to Castex, Polaillon formerly made a semi-circular incision upon the posterior and inferior border of the jaw, in a manner to circumscribe the tonsillar fossa. A modification of this method consists in making two horizontal incisions, which are afterwards joined by a third extending along the parotid border of the jaw.

For the operative procedure employed in the case herewith reported, it may be justly claimed that it furnishes the operator with the means of gaining ready access to the parts without sacrificing or

endangering, when carefully performed, any of the important neighboring nerves or vessels, and that, too, with the infliction of the minimum amount of traumatism. The employment of the thermo-cautery facilitated the final extirpation of the growth from its pharyngeal site without further loss of blood, or the entrance of the latter into the pharynx and larynx. —*Brooklyn Medical Journal.*

#### A NEW METHOD OF TREATING INDOLENT ULCERS.

Attention is called to the fact that the principal reason why indolent ulceration shows so little tendency to heal, as well as the readiness with which the resultant cicatrix, in cases in which the reparative process is apparently complete, breaks down into new ulceration, lies in the incomplete nourishment of the tissues through insufficient blood supply. The calloused edges of the ulcers consist of condensed connective fibres, but with few vessels. The base of the ulcer, likewise, consists of altered connective tissue structure, of a tendinous or sinewy character, which naturally offers resistance to cell proliferation and regeneration. These thickened conditions of the connective tissue have either arisen secondarily in consequence of chronic irritation, especially in the case of varicose leg ulcers, or the base of the ulcer represents, after necrotic changes in the skin have occurred, stretched fasciæ, which, through poverty of blood supply, do not allow of sufficient granulation formation, and refuse to respond to the usual means of stimulation. The method advanced by S., and which he claims originated with Dr. Harbardt, chief of the Frankfort clinic, is as follows: The entire ulcer is split lengthwise far into the healthy underlying tissue, and in addition, numerous cross cuts are made, which should also penetrate into the healthy tissues, at distances of about two ctm. An important point insisted upon, is the necessity of carrying the incision sufficiently deep to penetrate the underlying fascia. They should gape widely. After arresting the hæmorrhage, the parts are dressed with iodoform gauze. In from eight to

fourteen days the limb is redressed, when it is found that the gaping incisions are filled with healthy granulations. These quickly reach the level of the surrounding skin, and are soon the seat of an energetic growth of epithelium.

It is claimed for this method that the introduction of granulation growth from beneath the hardened connective tissue, through the gaping incisions, furnishes a means of supplying nourishment to the parts, which are thus placed under favorable conditions for repair. In addition, the cicatrix, being furnished with an increased supply of vessels from beneath, will break down less readily. It is apparent, and experience bears out the assumption, that a cicatrix, formed under such circumstances, offers a greater resistance to disturbances arising from mechanical influences than when a comparatively barren base, furnishing but little nourishment, forms the groundwork of a cicatrix brought about by other means.

(More than seventeen years ago, the abstractor saw cases of inveterate ulcer, of from ten to fifteen years' standing, successfully treated in almost precisely the same manner at Charity Hospital by Prof. Lewis A. Sayre, of New York, with the exception of the dressing of iodoform gauze. Instead of this latter, "basket strapping" and tight bandaging were used. The strapping was done with the old-fashioned diachylon plaster, extending from the toes well up the leg, and it was a noticeable fact that, although the dressings were not renewed until the outer bandages were soiled with secretions, this extending over a period of from seven to fourteen days, and sometimes longer, yet no offensive odor emanated from them. I have been led to ascribe this, in the light of more recent experiences in anti-septic wound treatment, to the exclusion of the atmospheric air; and further, to the fact that the plaster used contained lead compounds which, coming in contact with the wound secretions, formed combinations with the latter possessing anti-septic properties. Prof. Sayre writes that he has used the method for over thirty years, and that, as far as he is aware, it is original with himself.

An advantage not to be lost sight of in

the method of Dr. Sayre, is that it allows the patient to walk about, or at once return to work, a matter of no small importance to the class among whom chronic, inveterate and indolent varicose leg ulcers occur.)—F. Spaeth (Centralblatt f. Chirurgie, No. 14, 1888).—*Polyclinic.*

POISONS AND THEIR ANTIDOTES.

Summary of simple antidotes to the commoner forms of poison, compiled for the *American Analyst* by Dr. Francis Wyatt:—

| POISONS.  | ANTIDOTES.  |
|---|---|
| 1. Acid—Carbonic, sulphuric, nitric, muriatic, nitro-muriatic, creosote, iodine, phosphorus.              | White of egg well beaten up with water. A teaspoonful of mustard flour in a cup of hot water. Very thick lime water—(in case of sulphuric, nitric, muriatic or nitro-muriatic acids).   |
| 2. Chromic acid, chromates, all preparations or compounds of chromium, antimony, copper, mercury or zinc. | Abundance of white of egg in water. A teaspoonful of mustard flour in water. Copious draughts of an infusion of salt herbs.   |
| 3. Ammonia, soda, potash, alkaline, silicates, and sulphates.   | Strong vinegar and water. Large doses of oil. Large doses of milk.  |
| 4. Prussic acid and its salts all cyanides and sulpho-cyanides, oil of bitter almonds and nitrobenzine.   | Continuous and heavy douches of ice-cold water over the head and spinal column. Mustard plasters on the stomach and soles of the feet. Prevent sleep.   |
| 5. Ether, petroleum, benzine, fruit essence, concentrated or absolute alcohol.                            | Plenty of mustard flour in large quantity of hot water. Cold-water douches. Fresh air. Prevent sleep absolutely.  |
| 6. Compounds of baryta and lead.  | A teaspoonful of mustard flour in warm water. Strong solutions of Epsom salts and Glauber's salts in cold water.  |
| 7. Compounds of arsenic.  | A teaspoonful of mustard flour in warm water. A teaspoonful of dialysed iron mixed with the same quantity of calcined magnesia every five minutes for one hour. Then plenty of oil, or milk, or some mucilaginous tea, say linseed. |
| 8. Oxalic acids and its salts.  | Very thick paste of lime and water by large spoonfuls at the time. After several of these, large draughts of lime water. Finally, 4 ounces of castor oil.   |
| 9. Nitrate of silver.   | Large doses of ordinary kitchen salt dissolved in water, a tea-spoonful one teaspoonful of mustard flour in warm water.   |
| 10. Nitrous fumes of vapors arising in vitriol or chemical works.   | Frequent and small doses of strong acetic acid—the stronger the better.   |

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 MANITOBA, NORTHWEST AND BRITISH COLUMBIA LANCET.
 

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In the issue of the *Free Press* of the 11th ult., there is a paragraph headed, "Stabbing Affray," where the details of a fight are given, in which one man uses a scissiors as an offensive weapon, scarafying the face of his adversary. The injured man rushed into Main street and sought a policeman, his face bleeding at several points. On meeting a constable he prefers a charge and is then led off by this officer to have his wounds attended to. Surgeons are not very scarce in Winnipeg and a qualified medical man is retained by the corporation, part of his duties being to attend such cases; but the profession was entirely ignored, and we read the injured man was taken to Pulford's drug store to have his wounds dressed. Now we know this gentleman to be a very excellent chemist and druggist, but if he rivalled Faraday himself in his chemical knowledge, it certainly carries no guarantee that his surgical capabilities are of equal brilliancy, and we condemn in no doubtful manner the usurpation by any chemist of the work belonging either to a qualified surgeon or physician. His doing so disturbs the accord which should exist between the two callings, and further in so acting he places himself in antagonism to the law, and subjects himself to a prosecution. Fortunately for transgressors in Winnipeg though there is a college of physicians somewhere, the high pressure epoch in which we live has rushed it on to senility ere emancipated from the cradle, and the old lady is quietly snoozing in some unknown corner of the city, waking up occasionally to gobble any twenty-five dollar fees for registration which may be accruing, and then, like the python after his gorge, lapsing into a condition of inertia. By the way, what comes of these fees, and in what way do the profession in Manitoba benefit by this august body? The Colleges of Physicians in London and Dublin are live corporations examining and licensing bodies, with powers to inspect and supervise apothecaries and chemists, and guard the privileges which diplomas and degrees confer on men who have obtained

them—powers which are constantly used for the welfare of the profession and the public good. But here we have Orville's, Kergan and his staff of peripatetic cure alls, and a host of others of the like species prancing over the province and disfiguring the daily papers with their unprepossessing physiognomies and lying undertakings, which however, extraordinary though it be, is found to be sufficient to gull the public and to enable these pirates to glean all the dollars and cents which the culpably credulous can lay their hands on. We would suggest that the executive of the Manitoba College of Physicians wake up from their lethargy, and for the dollars that they collect from the profession make some feeble effort to show that they are not without life, even if it prove to be only of that low order enjoyed by the mollusc.

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 BOOKS.
 

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## ALDEN'S MANIFOLD CYCLOPEDIA.

The third number of this valuable publication lays on our table. It might fairly be called the people's cyclopædia, its most moderate price placing it within the reach of all. The work is sure to command an extensive sale.

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 MISCELLANEOUS.
 

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REDUCTION OF PARAPHYMOSIS.—Paraphymosis may be easily reduced, it is said, by winding common twine firmly around the organ, from the extremity backwards up to the middle of the member. In a few minutes, on removal of the twine, reduction can be quite easily effected by ordinary manipulation.

DR. HERALD, of Newark, N. J., has, during the past six months, had fifty cases of lead poisoning in his practice, which he has traced to soda water contained in five-cent patent-stopper bottles. In some of the stoppers examined by him he found 42.4 per cent. of lead, and in others 83.6 per cent. The action of the carbonic acid in the water upon the lead in the stopper ultimately produces a bicarbonate of lead, which, when absorbed from the stomach, causes lead poisoning.

DR. SIOTIS reports the case of a patient who had swallowed fifteen sovereigns. He complained of severe pain in the epigastric region. Auscultation revealed the distinct clinking sound of the coins when the patient moved. Purgatives were useless. Pieces of opium and belladonna were then administered. The next day three gold pieces were found in the fæces, and a painful cylindrical tumour was detected in the rectum. On the following day four other pieces were expelled, and severe pain was felt on the right iliac fossa. When percussed this region gave a metallic sound. The remaining gold pieces were shortly afterwards expelled, and the patient completely recovered.

POST-GRADUATE CLASSES IN BERLIN.—The arrangements for the next course of lectures to practitioners in Berlin were published last week. The course comprises twelve sections:—Anatomy and Histology, normal and pathological; Materia Medica and Toxicology; Medicine; Mental and Cerebral Diseases; Nervous Diseases and Electrotherapy; Surgery; Ophthalmology; Otology; Laryngology and Rhinology; Obstetrics and Gynecology; Dermatology and Syphilis; State Medicine and Hygiene. Each section consists of from one to fourteen classes. Further particulars may be obtained from Herr Anders, Dorotheenstrasse 33 I. The course begins on March 11, 1889, and will last about six weeks.

PHOTOGRAPHY OF THE MALE BLADDER.—We hear that Mr. Harry Fenwick and Mr. Pearson Cooper, of the London Camera Club, have been working for some considerable time at photography of the human bladder. Various obstacles were in turn recognized and overcome, and they have now so far perfected their vesical camera and method as to obtain good negatives of the interior of "dummy" and dead bladders. They hope before very long to describe a method of recording the appearances and progress of diseases of the living bladder. The negatives are taken *per urethram* through a tube of 23 French calibre (11 or 12 English.)

CLINICAL SOCIETY OF LONDON.—Mr. E. H. Fenwick contributed a case of En-

cysted Stone, in which supra-pubic cystotomy was performed, and the stone removed by means of chisel and mallet. The patient had been under the care of Dr. Hine, of Leytonstone, and the symptoms had lasted eight years. The calculus could be felt bimanually, and was subsequently discovered to be hour-glass in shape. The smaller piece (1½ oz.) was found projecting into the bladder at the level of the left ureteral orifice, and the larger portion (4½ oz., the size and shape of a large hen's egg) lying in a diverticulum outside the back and base of the bladder. These two portions were connected by a very slender neck. The vesical piece was easily snapped off, leaving the neck protruding from the threepenny-piece-sized orifice of the diverticulum. The position of the opening rendered much dilatation of it dangerous. It was impossible, therefore, to extract the encysted portion entire. Attempts to crush it by means of lithotrite or forceps failed. A chisel was guided through the orifice of the diverticulum and laid upon the stone, elastic counter-pressure being afforded by Petersen's rectal balloon. The calculus was then cut through with repeated blows with a mallet. After many shiftings of the pieces and sections in every direction, the stone was chiselled into sufficiently small fragments to allow of their being extracted through the orifice. The wound rapidly healed, and the patient left for the country in six weeks without an untoward symptom.

TUBERCLE IN THE AORTA.—P. Dittrich relates (*Zeitsch. f. Heilk.*, abstr. by Weichselbaum, *Centribl. f. Bacteriolog.*, iv., 20) a case of acute miliary tuberculosis in a boy, twelve years of age, in which the source of general infection appeared to be the rare (hitherto undescribed) condition of tuberculosis of the aorta; for to the posterior wall of the ascending aorta adhered some tuberculous lymphatic glands, from which the tubercle had spread into the coats of the vessel. Bacilli were found both in the glands and in the aortic wall, and it is assumed that they were disseminated through the blood stream by direct detachment from the interior of the vessel.

**DR. BATTY TUKE ON THE WHITECHAPEL MURDERS.**—Dr. Batty Tuke contributes an article to the *Scotsman* in which he combats the view that the perpetrator of the Whitechapel murders is an insane person. He concludes "it would not be hard to imagine the commission of an isolated act of this character by an insane person, but the whole circumstances of the commission of these crimes, save one, are outside insanity. If they have been committed by a lunatic, his is a case which, in this country, is without parallel or precedent. I have said the circumstances of these crimes are outside insanity, save one; that circumstance is, of course, the horrible nature of the act; but are we to deduce insanity from the revolting nature of the crime alone when all the other circumstances point away from it? Why should we underestimate the power of strong human wickedness and overestimate that of weak human insanity? For my own part, I can more easily conceive these crimes being the result of savage wickedness than of insane mental action. There is a consciousness in the first idea which there is not in the second. Moreover, there is an incentive to wickedness productive of crime analogous to those now under consideration, which only those very intimately acquainted with the dark records of medical jurisprudence know of. This is not the place to speak of it, and I only allude to it in order to indicate that there are incentives to crime unappreciable by the great mass of the community."

**THE WHITECHAPEL MURDERS.** — An eminent surgeon writes to us:—The crimes which have lately been committed in Whitechapel have given rise to many theories and speculations, prompted rather by a desire to account for them—that is to say, to find some motive for them—than by any knowledge of the subject. Most of those who have written to medical or daily papers have treated these occurrences as though they were unprecedented in the annals of crime. Therefore, however revolting be the subject, it seems desirable to point out that such is by no means the case; but that a certain horrible perversion of the sexual instinct is

the one motive and cause of such apparently aimless acts, and that the criminal is neither insane nor prompted by pseudo-religious rancour against an unfortunate class of women. The most exhaustive and judicial treatise on this subject divides this form of neurosis into three divisions—local, spinal and cerebral—but the individual may be affected simultaneously by more than one of these forms. The cerebral neurosis fall naturally into four sub-classes:—1. Paradoxia, that is, untimely desire (in regard to age). 2. Anæsthesia, absence. 3. Hyperæsthesia, excess. 4. Paresthesia, perversion of desire; among these last are cruelty and murder. He says (omitting certain parts):—"These cerebral anomalies lie in the province of psycho-pathology. They occur, as a rule, in persons mentally sound, in a variety of combinations, and in them originate many sexual misdemeanors. They are worthy of study by the medical jurist, because they so frequently produce perverse and even criminal acts." Krafft-Ebing then goes on to give, in sufficient detail, accounts of five trials with conviction for the murder of women (sometimes of children) and mutilation of their bodies, and he refers to three other such convictions, naming the authorities. Of these criminals, one Verzetteli, condemned in January, 1872, had murdered and mutilated three women, and had attacked five others with murderous intent. The escape of his last victim led to his detection. One of Lombroso's cases is a certain Gruyo, who thus slew and mutilated five women, and was discovered on the murder of a sixth after ten years of immunity. Several of the condemned persons confessed to the disgusting motive of the crime, and not one of them was found to be insane. These acts are not committed by women (save in one exceptional case), nor is it likely that any woman would have the nerve, bodily strength, and audacity to carry out two murders, at an interval of only a few minutes, as was done in October.—*British Medical Journal*.

**COLLECTOMY FOR MALIGNANT DISEASE, WITH SUTURE OF THE INTESTINE.**—Mr. Kendal Franks operated on Oct. 30th, at

the Adelaide Hospital, on a man aged forty-eight, from whom he excised a large epithelioma, together with about six inches of the colon. The growth was the size of a large orange, and involved the hepatic flexure of the colon. It was remarkable previously to operation for its great mobility, generally being found to lie between the umbilicus and pubes as the patient lay on his back. The colon was divided on each side of the tumour and the intermediate portion removed, along with some small but hard glands which lay between the layers of the mesocolon. The divided ends of the colon were approximated, and sutured carefully with fine silk. The patient is at present in a convalescent condition. There was a large fecal evacuation on the fifth day per anum, and the bowels have been acting normally since. The structure of the growth was that of a columnar-celled epithelioma.

#### THE MEDICAL PROFESSION IN RUSSIA.

—The general state of the medical profession in Russia appears to be very unfortunate. Dr. C. Yaroshevski, in the *Russkaya Meditsina*, states that, though the number of doctors in proportion to the population is very much less than in other European countries, yet the destitution among them is alarming. Of late there have been numbers of suicides of medical men who were without the bare necessities of life. The fees for medical attendance are very low. There are, he says, 18,000 doctors for a population of one hundred millions, or one medical man to every 6,500 persons. In Odessa 40 per cent. of the whole population, and 94 per cent. of the very poor, are stated to have died without having had medical attendance. A similar state of affairs exists at Kostrome. Dr. Yaroshevski attributes this deplorable condition of things to the ignorance of the Russian people, who prefer to consult soothsayers and magicians, to the monopoly enjoyed by the pharmacists, and to the large number of Feldshers who are allowed to practise. The Feldshers are generally men who have served in the Ambulance Corps or have been hospital attendants, and on the strength of this slight knowledge they are licensed to practise.

**PYLORECTOMY.**—A successful case of excision of the pylorus is recorded by Drs. E. Goldenhorn and S. Kolatschewsky of Odessa (*Berl. klin. Woch.*, No. 51). The patient was a lad fifteen years of age, who was admitted under Dr. Goldenhorn for extreme dilatation of the stomach following an attack of pain and vomiting eight years previously. The diagnosis was simple stricture of the pylorus, an unusual event in so young a subject; and after due preparation Dr. Kolatschewsky performed the operation of excision. The patient made a good recovery, slightly prolonged by the formation of an abscess at the seat of suture. The portion of the stomach removed included 2.5 centimetres of the lesser and 4.5 centimetres of the greater curvature; the mucous membrane was thickened and thrown into folds, which at the pylorus itself formed polypoid masses, completely blocking the orifice. This condition doubtless resulted from the cicatrization of an ulcer seated at the pylorus, and not from any congenital defect.

#### NAPHTHALIN IN INTESTINAL CATARRH.

—Dr. Holsti (whose work is mentioned in the *Nordiskt Mediciniskt Archiv*) has tried naphthalin for intestinal catarrh with foul-smelling secretions. The dose for adults was 0.5 gramme four or five times a day, but it should not be given for a longer time than from ten to fourteen days. For children of from one to two years old he gave 0.12 to 0.18 gramme four times a day. In all cases, both in adults and children, there was an improvement at the commencement. Sometimes there was a relapse, notwithstanding the renewed use of the naphthalin. Dr. Holsti specially recommends it in severe chronic enteritis where other drugs have been employed without effect. He found no injurious effects from its use in adults; in one case—that of a child of a year and a half old—the use of naphthalin in doses of 0.12 gramme four times a day was followed by great anæmia, although the intestinal catarrh was much benefited. Hence Dr. Holsti advises care in the administration of naphthalin to children, especially when given for a lengthened period. He found it fail in two cases.



**ALBUMINURIA IN RELATION TO LIFE INSURANCE.**—At the recent annual meeting of the Association of American Physicians, held at Washington, the subject of renal disease was dealt with by several members from curious points of view. One of the most practically interesting papers was read by Dr. James Tyson of Philadelphia, and referred to the significance of albuminuria in respect to life insurance. The writer pointed out that in certain cases candidates presenting this symptom might be accepted, although he would draw the line rigidly at those who, in their general health, in the fact that no casts accompany the albumen, in the small quantity of the latter, and the high specific gravity of the urine, present no evidence of structural kidney disease. When the specific gravity is above 1020, the assumption is that the albuminuria is functional; if it be 1010, it would be hazardous to accept such a case, however good his health may be, even in the absence of casts. Of course, evidence of cardiac hypertrophy with albuminuria would suffice to exclude the candidate; nor if a patient suffering from albuminuria were over forty years of age should he be accepted unless he has long been under observation. The subjects of true gout were also recommended as unfit, seeing their liability to renal disease.

**ANTIPIRYN IN LARYNGISMUS STRIDULUS.**—Montagu Percival, Medical Officer, Mount Bischoff Hospital, Waratah, Tasmania, says: I have had a series of cases (twenty-four in number) of laryngismus stridulus during April and May of the present year, of reflex origin, due to the sudden changes of temperature to which we are liable, with cold damp winds. I would wish to record the success I have had in treating these cases with antipyrin.

On the evening of April 4th, I was called to see a child, A. N.—, aged eighteen months, with the usual symptoms of dyspnoea, with crowing inspirations, accompanied with convulsions. The treatment I then adopted was an emetic of ipecacuanha, to be followed with sedatives and hot flannels applied to the neck and upper part of the chest. The follow-

ing morning I received a message saying the child was no better, and that the difficulty of breathing had continued through the night. In a case of pertussis, with more than usual irritable cough, which came under my care a few months previously, antipyrin answered extremely well, and it was the benefits which accrued in this case that suggested the same treatment. I gave two-grain doses of antipyrin every hour, with the satisfactory result that the difficulty of breathing ceased and the child fell asleep. The same dose was then given every two hours, and the next day the child was running about well. With all the other cases I had the same result, with the exception of one, a child of four years and a half, in which I had to increase the dose to five grains before the paroxysms ceased. I cannot say whether the same result might be expected in cases due to direct or centric irritation, but I should undoubtedly give it a trial.

**PARACENTESIS PERICARDII.**—The patient, a fairly-nourished though anemic-looking girl, aged 20, I found suffering from a very severe attack of rheumatic fever, and she had been ill for some days before I saw her. I found her sitting up erect in bed. The respirations were very rapid, about sixty-five to seventy in the minute; quick, irregular pulse; and the temperature high. The joints were much swollen. She was sweating profusely and suffering great pain, and was literally gasping for breath. It was pretty clear, therefore, unless something were promptly done to relieve her, she could not live long. On examining the cardiac region, muffled sounds could only be heard, and nothing was to be made out of the state of the heart for certain, although it was pretty evident she was suffering from endocardial or pericardial trouble. The apex of the heart appeared to be tilted up to and under the edge of the sternum, about one inch and a half above its attachment to the ensiform cartilage, and, as far as one could make out, it was close to the under surface of the bone. My partner, Mr. O. P. Hooker, saw the case with me, and we determined to perform paracentesis pericardii. This

I did with an ordinary exploring trocar, passing the instrument carefully a little to the left of what seemed the apex of the heart, the trocar going through the edge of the cartilage of one of the ribs on its way to the pericardium. About one ounce of yellowish-red fluid was drawn off, and it was clear this came from the pericardium, as the cannula could be seen "bobbing" up and down with each pulsation of the heart. She bore the operation very well, and the symptoms were at once relieved, the respirations rapidly falling to about thirty-five to forty a minute. She made a good recovery, and has been earning her livelihood as a domestic servant for some years. Tapping the pericardium is an operation which has not been often performed, I believe; but I feel sure, unless we had done it in this case, we should have lost our patient; and, if ever called upon to perform the operation again, I should not hesitate to do it, for surely the relief given to the embarrassed heart was the means of saving the patient.—*Hugh Taylor.*

**REGINA v. CLARENCE.**—For a man to give his wife syphilis may be an unlawful act in the sense of being cruel, but it is not an offence which justifies a conviction upon a criminal charge. Such is the verdict of the Court of Appeal in a full court of judges by the decisive majority of nine to four. Horrible as the disease is in itself, and terrible as its far-reaching effects are, we nevertheless recognize the strength of the legal grounds on which the majority of the judges declined to consider that the existing statutes can be construed to apply to the transmission of syphilis from husband to wife. Perhaps the chief point in the case was the question as to the woman's consent to the act, which was undoubted. Those who were in favor of a conviction urged with much truth that had the woman known what would be the full consequences of the act, she would have resisted, and would have been legally justified in resisting, that the act she had consented to was an innocent and lawful one, and that consent to one act which was innocent was no consent to another which was different. But on the

other side it was argued that the doctrine that fraud vitiates consent was not applicable in this instance, and that mere suppression of a fact did not render criminal an act in itself lawful. A case which was decided some few years ago by the late Mr. Justice Willes in an opposite sense presented this very important difference in that there the parties were not husband and wife. The language used by the judges in reference to the act as abominable, cruel, wicked, foul, and atrocious barbarity, and a most malignant injury, is not one whit too strong. The question remains how far this decision calls for a revision of the law. To communicate scarlatina knowingly is an offence against the law. Why not, then, to communicate syphilis? Such a law would, of course, apply alike to both sexes. At present, this dire disease may be propagated with impunity; the innocent are the sufferers, and their case calls for relief.

**AUSTRIAN JUVENILE INEBRIETY.**—The temperance of Austrian women has long been proverbial; but, if the accounts recently published respecting the intemperance of boys and girls in that country are reliable, we fear that Austria will not long continue to sustain its former good character for feminine sobriety. So serious and widespread has inebriety been of recent years among school children that the Vienna School Board have, though hitherto ineffectually, been making strenuous efforts for the prohibition of the sale of intoxicating drinks to children. The Board has just resolved to invoke the intervention of the Government, and a Bill is to be laid before Parliament during the present session to prohibit the selling of intoxicants to boys and girls under 15 years of age. So alarming is the present state of matters that the appearance of a boy at school in a state of drunkenness is by no means a rare sight. During the winter poor children are often sent to school with only a glass of the cheapest spirits for breakfast, partly to allay hunger and partly to "keep out the cold"—that venerable delusion which still lingers in England. Slav children of the tender

age of five and six years are so "seasoned" to alcohol from infancy by the administration of small quantities in milk that these youthful scholars can take a liberal dram without showing any symptoms of intoxication.

**THE TRUE NATURE OF TYPHLITIS.**—The recent discussion at the Medical Society upon Dr. Bull's paper, as well as that which followed the paper of Mr. Treves read before the Royal Medical and Chirurgical Society last session, go to confirm the opinion as to the rarity of a true typhlitis apart from inflammation of the appendix cæci. In the clinical lecture contributed to these columns a few weeks ago, Sir Dyce Duckworth affirmed that "without doubt the most common cause of typhlitis is ulceration of the appendix," although he does not wholly discard the time-honored explanation of typhlitis stercoralis. As pointed out at the Medical Society by Dr. Weir, the evidence of the post-mortem room gives no countenance to the old doctrine, for in every recorded fatal case the appendix was found to be the starting-point of the mischief. The same view was forcibly expressed by Mr. Treves, and although the opinion may be said to be founded only on cases which have required surgical intervention, or which have proved fatal from perforation of the appendix either directly or indirectly, yet it would be difficult to establish a clinical distinction between such cases and the more common class of case in which the symptoms resolve and recovery takes place. For our own part, we frankly admit that in the majority, perhaps in all, the cases of typhlitis it is the appendix which is inflamed, perhaps ulcerated, with a localised peritonitis (i.e. peri-typhlitis) as the consequence. That this should be frequently associated with fecal accumulation in the cæcum itself is not surprising; but that the cæcum is generally inflamed apart from the rest of the bowel, except in the unusual circumstance of long-standing impaction of its contents, as in cases of stricture of the colon or rectum, is most questionable. Granting then, that the symptoms ascribed to typhlitis are due really to inflammation

of the appendix (we strenuously object to the barbarism "appendicitis") and perityphlitis, there is nothing surprising in the frequency of the occurrence, or in its common termination in recovery, or in its liability to relapse; although as to relapse we lack definite statistical evidence upon its frequency. It is rather surprising to hear of so many cases passing on to suppuration, as in Dr. Bull's experience; and his recommendation to use the exploring needle to detect the presence of pus is one to be followed with caution. In these days of abdominal surgery it would not be surprising to find advocates for surgical interference in every case of perityphlitis. At present the discovery of suppuration is held to justify such intervention; but the physician may reasonably urge that even the existence of pus in a localized peritoneal exudation does not of necessity exclude spontaneous recovery. The appendix cæci will, we foresee, prove the battle-ground of a struggle between the advocates of a medical or surgical line of treatment in typhlitis.—*London Lancet.*

**CHOLERA FROM MILK.**—Dr. Simpson, the health officer of Calcutta, has made a searching investigation into a recent outbreak of cholera in the Alipur gaol, and, after careful examination into every conceivable source of contamination, he has arrived at the conclusion that the milk supply of the gaol, adulterated with contaminated water, was mainly responsible for the outbreak. The details of the report show that of 144 prisoners who had their food from the hospital kitchen, 39 were on milk diet and 105 on other diets. Eight milk-diet prisoners were attacked with cholera, and seven died, while 3 non-milk-diet prisoners were effected, and only 1 died. In the course of his investigation, Dr. Simpson discovered that the wife of one of the warders of the gaol, who lived on the banks of the Tolly's Nullah, opposite the gaol, was attacked with cholera, and died on March 15th, that is, three days before the first outbreak. Six warders of the gaol carried her body to the burning ghat, but none of them were attacked with cholera. It may be a question whether they brought any contagion

into the gaol. The milk supplied by the "gowalla" had frequently been found mixed with water, and he had on several occasions been fined. The water used for the adulteration of the milk was taken from Tolly's Nullah. Along the banks of the Nullah, for three miles, is a crowded population of the usual suburban type, and the water is defiled, we are told, by latrine, by stabling and cowhouse drainage, by cattle, and by the washing of clothes. It appears that cases of cholera along the banks of the nullah had occurred some time previous to the outbreak, and were attributed to the use of the water.

**THE MORTALITY OF PNEUMONIA.**—Dr. William Osler (*University Medical Magazine*, Philadelphia, No. 2) points out that hospital statistics do not warrant the assertion that there has been any marked increase in the mortality from pneumonia of late years, as asserted by some, although the census returns of the United States favor the latter statement. But, as Dr. Billings points out, the comparison with preceding years is inaccurate, since the data was very imperfect and unreliable. At the Pennsylvania Hospital, with a total of 704 cases since 1845, the mortality has been 29.1, a rate sometimes much exceeded, as in 1875 to 1877, when it was 39.2, and sometimes quite as much lessened, as in 1845 to 1847, when it was only 16 per cent. In the Boston City Hospital for thirteen years the mortality was also 29.1 per cent. Dr. Osler shows that in private practice the rate is lower than in hospitals, and points out that the increase of pauper populations in large cities is doubtless responsible in some measure for this diversity. Dr. Hartshorne's statement that the "mortality of to-day is, under similar circumstances, more than twice as great as it was forty years ago," is not thus borne out; and Dr. Osler shows that in many cases pneumonia is absolutely uninfluenced by treatment. Yet those cases which do call for treatment are precisely those in which our efforts are most futile. Post-mortem records show how seldom a simple pneumonia, apart from chronic disease of other organs, is a cause of death, but Dr. Osler

thinks that it may be useful to divide the fatal cases into three groups: "1. Those in which the death has resulted from such complications as gangrene, meningitis, and ulcerative endocarditis—conditions at present beyond our art to remedy. 2. Cases in which death has resulted from mechanical causes—over-distension and paralysis of the right heart. 3. The large group in which death has been due to failure of the general powers under the influence of the high fever, or of the specific poison, or of both combined." He has often asked himself why death occurred in some cases, and had been struck by the distended right heart and systemic veins in the young vigorous subjects that sometimes succumb. This seemed to indicate that the heart had failed in over-distension, and he was determined "not to let such cases die without a copious venesection." For ten years he has practised free bleeding (twenty to twenty-five ounces) in adults, and has seen but one case recover out of twelve to fifteen. The cases of bleeding in the late stage were uniformly fatal, as if the conditions present in pneumonia are something more than mechanical.

**CASE OF CHARBON; EXCISION; RECOVERY.**—*Much confusion has arisen in the past from the use of the word "pustule."* Bourgeois's work in 1863 on Malignant Pustule and Malignant Edema did much to advance a knowledge of the disease, and the investigations into the life history of the bacillus discovered by Pollender in 1852 carried us much further. Many things have been tried as local applications to the part, from walnut leaves to pure carbolic acid, applied after incision, and the actual cautery; but the method adopted in Mr. Sanders' case is the one generally acknowledged as the best—that is, free excision and the application of a powerful caustic; some using a strong solution of iodine, chloride of zinc paste, or pure carbolic acid, as an application to the raw surface.

A. M.—, aged fifty, was admitted into the infirmary on Oct. 22nd, 1888, with the following history. He had been a free liver, and had worked on and off at the docks for years. Three weeks

previously he was engaged in moving bales of wool, since which he had been engaged in ordinary laboring work. On the 19th (three days before admission) he noticed a pimple on his face; he scratched it and made it bleed. On the next day he noticed that it was black in the centre, and that it was swollen and surrounded by a red ring. Being much worse the next day, he applied for admission.

When seen the man presented the following symptoms. He appeared to be very ill; was trembling and could scarcely stand. Temperature 101.6°; pulse 110. On the left cheek was a black patch about three quarters of an inch in diameter, dry and anæsthetic; surrounding this was a zone of imperfectly formed vesicles, which was again surrounded by a ring of a red brawny œdema (three and a half by two inches); no sign of pus. He complained of no pain whatever, there was œdema of the eyelid and also of the submaxillary region, and the glands in this region could be felt to be enlarged.

The A. C. E. mixture having been administered by Mr. Pollard, the whole patch on the face was excised, the incisions being made through healthy skin. One small vessel was twisted, and the surface of the wound mopped with nitric acid. Dry dressing was applied. Bacteria were distinctly seen in the blood which was scraped from the surface of the excised mass.

On October 24th the wound was dressed for the first time, the œdema of the eyelid had disappeared, that of the neck was much less, but the glands still felt enlarged; the wound looked healthy; iodoform and dry dressing were applied. Temperature 99°; pulse 80. From this point the patient never had a bad symptom; the wound continued to be dressed with iodoform and wood-wool; it granulated up and healed till very little scar remained. He was discharged on November 17th, twenty-six days after admission, quite well.—MR. J. W. SANDERS, in the *Lancet*.

FOR ITCHING.—To relieve the itching of hemorrhoidal affections, pruritus ani, pruritus senilis, etc. wash the part with lukewarm water and good soap; then rub

in lanolin in the following combination: R Lanolin puriss, 30 parts, Vaselinei, Olei olivæ,  $\bar{a}$  20 parts. When the itching about the anus is severe, cocaine may be added thus:—R Cocainæ hydrochlorat, 1-10th to 1-5th part, Lanolin puriss, 30 parts, Vaselinei, Olei olivæ,  $\bar{a}$  20 parts. The addition of ten per cent. of flowers of sulphur has proved useful.—(*Therapeutische Monatshefte*)—*Medical News*.

DRESSING FOR ULCERS.—Besse treats chronic ulcers by sprinkling the surface with antipyrine; over this is placed a layer of salicylated cotton, kept in position by a bandage. The dressing is changed every day. When granulations appear, the ulcer is touched with nitrate of silver, and covered with pulverized iodoform.—*L'Union Medicale*.

ELECTRIC SHOCKS.—Mr. George A. Mayo, the electrician of the Van Depeole Company, has been interviewed on the subject of electric shocks. Mr. Mayo, received a shock of 3,200 volts some two years ago while acting as electrician of the Narragansett Electric Light Company, of Providence, Rhode Island. This, it is claimed, is the heaviest shock of electricity that a human being ever survived. Mr. Mayo was thrown on a fifty arc light dynamo, and received the full force of the current. His sensation on first receiving the shock, he states, was not at all unpleasant, and there was absolutely no pain, it instantly destroying all feeling except the roaring in the ears, and he compares the effect upon the system with that of laughing gas. He thinks he retained his senses for perhaps thirty seconds. The treatment used to restore him to consciousness was the use of several buckets full of water, and hard rubbing. His hands were terribly burned, but aside from that he received no permanent injury, save that he thinks his nervous system never quite recovered from the shock. Mr. Mayo is hardly in favor of the law in the State of New York requiring the infliction of the death penalty by means of electricity, inasmuch as it has not, so far, been practically demonstrated what shock is necessary to kill absolutely and under all circumstances without a hope of resuscitation.—*Electrical Review*.

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