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CANADA MEDICAL RECORD

DECEMBER, 1901.

Original Communications.

THE MECHANICAL EFFECTS OF INJURY.

By ALEXANDER MACDONALD, M.D., C.M.

Medical Superintendent Western Hospital, Montreal.

The following case is worthy of note, as illustrating an unusual form of injury, namely fracture of the skull, by direct violence applied to the top of the head, with fracture of the sternum and separation of the thyroid cartilages by the impact of the chin against the breast.

On the 14th October, 1901, a patient, A. P., was brought to the Western Hospital in an unconscious state. He had met with an accident through the boom of a derrick falling vertically on his head, some seven minutes before his admission.

Upon examination, he was found to have three scalp wounds, one over the left eyebrow, a second over the parietal bone, 2 inches above the ear, and a third a little behind the vertex. All the wounds were bleeding freely and each was about three inches in length. The pulse was 88, temperature 97 and the respiration 24. The left pupil was narrowly contracted, the tongue lacerated, and a bloody froth exuded from the mouth. There was some loose crackling when the larynx was handled, but no external wound was observed. The lungs and heart were in the normal condition.

The wounds were sutured and dressed, hot water bottles applied, enemata given, and, these failing to move the bowels, Croton oil was administered by the mouth to no

effect. The patient being still unconscious was supported by nutrient enemata. Twenty-four hours after the accident the left lung showed a dullness over the base, and in 80 hours from admission the patient died.

At the autopsy, performed by Dr. Macphail, the scalp tissues were found infiltrated in the region of the wounds, all of which were well healed. The skull cap showed a separation along the line of the squamous suture, more marked upon the left side, but no definite fracture could be demonstrated. The dura mater was adherent, and on either side of the longitudinal sinus, over the brain, was a thin layer of dark clotted blood. The brain, on the right side, in the posterior part of the temporal lobe, had a small diffuse hemorrhage. The base of the skull was not involved and no damage to the cord or vertebra was observed.

Upon making an incision in the median line, from the chin downwards, a wide extravasation of blood was observed over the larynx and upper part of the sternum which extended to all the tissue at the root of the neck and deeply into the apex of the lungs.

When the sternum was removed it was found that the manubrium was separated from the gladiolus along the line of union, and the thyroid cartilages were divided along their anterior borders. The anterior mediastinum was filled with blood, which manifested itself in the lungs as a broncho-pneumonia. The left base of the lung was consolidated.

It would appear that the squamous sutures were separated by the impact driving down the parietal bones upon the temporal, that the larynx was rent asunder by the chin compressing it against the vertebral column, and the sternum was fractured by the indirect force transmitted through the chin.

This case is interesting as revealing very clearly the mechanical effects of injury.

December 1, 1901.

Selected Articles.

ARTERIOSCLEROSIS.

There is a wide difference in opinion as to the meaning of the term arteriosclerosis. Atheroma is used synonymously by some writers, but it would be wise if a distinction were made between the two conditions, and the term atheroma restricted to the end process of arteriosclerosis. The disease of the arteries begins by a deposit in the middle and internal coat, which ultimately leads to a fatty degeneration, to which the term atheroma should be applied. There is still much obscurity in the relation of these changes. Does sclerosis always precede the fatty degeneration? What relation do sclerosis and atheroma bear to miliary aneurism? These questions must be left to the future. One thing is certain: the amount of work that has been done on the arterial system is very much less than its importance justifies. It is one of the chief causes of death if we only include those cases of arterial rupture which are most obviously associated with the condition; if we add to the list the deaths that may fairly be attributed to vascular disease, such as contracted kidney, heart lesion, etc., it furnishes a mortality far in excess of all the acute diseases. The difficulty in many cases is in deciding whether the changes in the vessel wall are primary or secondary. In Bright's disease it is possible that the vascular sclerosis may result from the defective elimination due to the inflammation, or the kidney changes may be due to the increased vascular pressure. It is possible that the practical application of Gaertner's tonometer may do much to clear up the obscurity which now exists regarding vascular degeneration.

As a rule, arteriosclerosis comes on in advanced life, and the old saying that a man is as old as his arteries is quite as true as most maxims. Occasionally extensive sclerosis is noted in early youth, but instances are exceptional. In the fourth decade cases become more frequent, and in the fifth decennium the condition is common. The process in some degree is always present in the aged, though the examples that are given of men who are active mentally and physically after fourscore show that the process may be long delayed. Bismarck and Gladstone are often mentioned, but one of the most striking examples was Schaumberg, the celebrated general - of

William III., the hero of a hundred battle-fields, who, when over eighty years of age, commanded the army in Ireland under circumstances of privation, pestilence and anxiety such as might well have sapped the resolution of a younger man.

The causes of arteriosclerosis are quite as obscure as any chapter in the etiology of medicine. As has already been pointed out, it is difficult to distinguish cause from effect. There can be no extensive arteriosclerosis without a rise in blood pressure, and this may lead to changes in the organs. Toxemia in some form is unquestionably the cause of the majority of cases. It may have its origin in defective elimination, or be the product of the acute or chronic infections. Syphilis is a frequent cause of arteriosclerosis. Whether there is a difference between the sclerosis of syphilis and that due to other causes is an unsettled fact. In some cases there is an endarteritis that may be termed specific, and over which specific treatment exerts considerable influence. These cases usually occur within ten years of the primary infection. Syphilitics suffer from early arterial changes strikingly like those which occur in the aged, and which do not yield to specific treatment. We may conclude that syphilis acts as a predisposing cause of arteriosclerosis, as well as having a distinct endarteritis, the latter alone yielding to antisyphilitic remedies.

Defective elimination is the direct cause in the majority of cases. Apoplexy is one of the commonest results of arteriosclerosis, and this has been commonly ascribed to plethora and a full habit. This dictum must be modified, as the figures show that a large number of those suffering from apoplexy are spare. A red face and sanguine temperament are not specially indicative of apoplexy, only in so far as they indicate a too-liberal consumption of food. As a rule the spare individual of bilious temperament suffers more degeneration, providing he is a liberal feeder, than does the one who accumulates flesh. Uric acid has become the fashionable scapegoat. If we mean by this simply defective elimination, we shall have a broader conception of the underlying principles. This furnishes the explanation of the development of arterial disease in the aged: the eliminative organs become less efficient, and there is an accumulation of waste products which excites a proliferation in the connective tissue of the smaller arteries.

The acute diseases are charged with causing arteriosclerosis, but they play a secondary rôle. Scarlet fever, typhoid and other infections probably do not last long

enough to cause extensive arterial disease, but they frequently initiate an inflammation of the kidneys which leads to extensive vascular degeneration.

If the causes of arteriosclerosis are obscure, the symptoms are still more uncertain. Frequently, cases live for years with torturous temporals, arcus senilis and a hard pulse with a curved radial. In other cases these symptoms are almost absent, and yet they suffer from arterial rupture. This shows the distinction between atheroma and sclerosis; the latter may exist in high degree and for a long time without rupture, but if fatty degeneration and softening occur the wall gives way. The distribution of the sclerosis determines to a large extent the symptoms. As a rule the smaller arteries are most involved, but it is rare that the aorta escapes. All branches of the arterial system are not equally affected, and the extent of the process in the arteries of the different organs is subject to wide variations. The large arteries may be extensively affected with a marked alteration in vascular pressure.

If the tonometer of Gaertner fulfils its expectations valuable light will be thrown upon arterial disease. In it we have an accurate and rapid instrument for measuring vascular pressure. This has heretofore been lacking, the only substitutes being the finger of the sphygmograph. The latter is very unreliable. The finger readily appreciates a change in the character of the pulse, but the conditions are so variable under which the artery is felt that at best only an approximate idea of vascular pressure can be reached.

The chief clinical signs of arteriosclerosis are increased arterial tension, palpable thickening of the arterial wall, accentuation of the second aortic sound, and hypertrophy of the left ventricle. The most important is the non-valvular hypertrophy of the left ventricle with accentuated second sound. The next most important is high arterial tension, but this may be temporary; if it is continuously found over a considerable period it is strongly indicative of arteriosclerosis. Auscultation of the posterior surface of the chest furnishes the best index of an accentuated second sound; if it is heard distinctly between the seventh dorsal vertebra and the spine of the scapula it is strongly confirmatory of arterial contraction.

The prognosis is usually unfavourable, but it depends on the extent to which the heart, brain or kidneys are involved in the degeneration. The disease once set up is apt to be progressive, because the conditions that give rise to it are irremediable. Patients should be frankly told

the condition of affairs and warned against a persistence in habits or methods of life that favour the progress of the disease. Much is to be gained by a recognition of the condition as a disease *per se*. The profession has been slow in recognizing the condition clinically, notwithstanding the frequency with which it is observed post mortem.

In treatment, much depends upon a regular habit of life. These patients should avoid emotional strain. Exercise should be regular, but not excessive. Alcoholics and tobacco should be interdicted. Above all the food supply should be reduced to a diet which secures metabolic equilibrium, but nothing should be taken beyond this. The interdiction of meats on the theory of a uric acid diathesis is false, but patients should be given a due proportion of proteids, carbohydrates and fats. It is possible to obtain from milk and eggs all of the nitrogen that is needed; if these agree with the patient he may obtain them from this source, but there is no evidence that they are better than meat. The chief difficulty is in reducing the total quantity of the food in liberal feeders to an amount required for the nutrition; on such a diet the patients often complain that they are being starved.

The medical treatment in the complicated cases depends upon the underlying conditions. Before there has been extensive damage to the vital organs the treatment must consist of a recognition of the cause; if faulty nutrition, this must be corrected by diet; if toxemia is present an effort must be made to eliminate. If syphilis is recent, a vigorous antisyphilitic course must be instituted.

Temporary relief may be obtained with nitroglycerine. It is surprising what large doses can be taken without disagreeable symptoms. The dose is to be regulated by the idiosyncrasy of the patient. Iodide of sodium in small doses, five to seven grains three times a day well diluted, continued for months, has been useful, but no medicinal treatment is of avail without careful attention to the personal hygiene of the patient.—Harold N. Moyer, M. D., in *Medicine*.

SUGGESTIONS BEARING UPON THE DIAGNOSIS AND TREATMENT OF FRACTURES AT THE LOWER END OF THE HUMERUS.

By THOS. W. HUNTINGTON, M. D., San Francisco.

A somewhat extensive experience in the management of fractures at the lower end of the humerus, together with frequent opportunities afforded me for the inspection of cases in the hands of capable, painstaking colleagues,

has left me with the conviction that the results obtained by the accredited methods of treatment are far from satisfactory.

Every general surgeon has upon his list one or more cases illustrative of this point. Too often pain, deformity and limited function cripple the patient and humiliate the attendant. It matters little that the patient has been forewarned as to what have been regarded as inevitably disastrous consequences of his injury, nor does the approval of able counsel as to the line of treatment adopted free his mind from the impression that the result ought to have been more satisfactory. With the facilities now at hand is it possible to establish and maintain a higher standard of excellence in the treatment of elbow-joint fractures? The time has come when surgeons should answer this question definitely. From our large hospitals, wherein the pace is set so far as surgical achievement is concerned, there should issue an edict setting forth the rules of practise governing these cases, thereby approving or condemning methods which now prevail.

Fractures in this locality suggest a multiplicity of lesions, whose pathology and individual peculiarities have been adequately described, demonstrated and illustrated. Their limitation is between the supra-condylar line and any imaginable communication of the lower end of humerus. Their thorough understanding depends upon an accurate determination of three points: 1. The number, relation and direction of fracture lines. 2. The extent and character of displacement or dislodgement of fragments. 3. The relation of the fragments to the ulna and radius.

It is absolutely essential in considering these points, that appeal be had to the radiograph for a satisfactory interpretation of existing symptoms. No longer can the visual and tactile senses be implicitly relied upon for every link in the chain of evidence. It is true that the determination of the existence of a fracture, together with its general features, is a comparatively easy task. To predicate its exact limitations, to draw an accurate clinical picture, to identify each individual fragment, and give to it its true value in relation to prospective deformity or impairment of function, is most difficult of accomplishment. Surgeons will continue to inspect and palpate, to compare and manipulate. The three bony prominences of the elbow will be appealed to for such evidence as they may afford. The condyles will be scrutinized for mobility, crepitation, or faulty relations, but in most cases the evi-

dences will be incomplete and altogether inadequate until one or more shadow pictures have been carefully inspected and interpreted. Aside from diagnostic measures, successful treatment of these fractures depends upon three factors: 1. Perfect readjustment of fragments. 2. Permanent maintenance of normal relations. 3. As early passive movement as is consonant with safety.

It is not my intention to advocate any conventional plan in dealing with this most perplexing problem. Flexion or extension of the forearm as a universal law are questions that interest me very little, if at all. My contention is that the surgeon must be certain of his initial adjustment, and as certain that proper relations are maintained throughout the progress of the case. This point seems not to have received the attention it clearly merits, and to this fact can be attributed many disastrous results. What right has the surgeon to assume that faulty relations will not be re-established within a few hours or days subsequent to the first dressing? And in the presence of such a state of affairs can he be justified in deferring corrective measures until the integrity of the joint is hopelessly impaired? On the contrary, the more rational plan is to make the initial adjustment as perfectly as may be in the presence of the diagnostic radiograph, with the patient under an anaesthetic. The position of the forearm will be negotiated so as to conform to the requirements of the case. A light dressing will then be adjusted, eliminating all thought of the maintenance of the fragments by direct pressure. For this purpose, plaster of Paris has advantages superior to any formal splint. The corrective position should be carefully maintained by an intelligent person until the cast has become self-supporting. Within twenty-four or forty-eight hours the initial work should be checked up by a second radiograph. If there still remains a fault in adjustment or alignment, a second or a third attempt should be made for its correction.

I am fully aware of the fact that the general practitioner whose life is spent in the isolated communities of the interior can not be expected to maintain, nor is he often within easy reach of an X-ray laboratory. That must be conceded to be his misfortune and not his fault. But it must be remembered that the work done in his line is coming to be regarded as constituting a specialty, and it is to be hoped that X-ray laboratories conducted by photographers or other competent workers will be established with profit in most of our interior towns.

The matter of early resort to passive movement may be dealt with in a few words. Assuming that correct positions have been maintained for five or six days, the joint surfaces will admit of considerable play without disarrangement of fragments or unwarrantable pain. In pursuance of this plan I have usually removed the splint on the fifth day. Movement is effected through a small arc. If the forearm occupy the semi-flexed position I carry it up toward a right angle through an arc of ten or fifteen degrees. If this has been done without appreciable violence, fixation in the new position is secured as before. In this manner the effort is renewed, and the position changed every second or third day, with successive increase of motion. There are occasional cases which seem wholly incorrigible so far as manipulative measures are concerned. Here the possibility of an unfortunate result under ordinary measures becomes an assured fact. Under these circumstances I should have no hesitation in converting a closed to an open fracture under proper precautions, ascertain the discrepancy, and wire or suture the obdurate fragments. The thought to be borne in mind in this connection is that if such a step be taken at all it must not be delayed. The greatest possible benefit to be derived from operative treatment can only be realized before efforts at repair have progressed to any appreciable extent.

It was not my intention this time to enter upon any detailed description of special fractures or their sequels, but I am certain that you will be interested in one phase of the subject, which seems not to have been generally understood.—“gunstock deformity,” or, according to the more recent nomenclature, “cubitus varus,” a condition or deformity resulting from this class of fractures more often than is generally supposed. About twenty years ago Dr. Oscar H. Allis, of Philadelphia, called attention to this deformity, and subsequent authorities have dwelt upon it at considerable length. It consists in a permanent adduction of the forearm resulting in obliteration of the obtuse angle, which normally is made by the axis of the humerus on the one side and the radius on the other. This has come to be known as the carrying angle, enabling a weight to be suspended from the extended arm without striking the leg of the bearer. This condition usually exists without interference with rotation or flexion of the forearm. It has generally been ascribed to a sliding upward of the internal or sliding downward of the external condyle. Very recently, in a most elaborate article, in the *Annals of Surgery* for September, 1900, Stinson has demonstrated

that this deformity is associated with transverse supra-condylar fractures of the humerus. In one of my own cases occurring in a child of seven years this condition occurred in mild form after a complete separation at the epiphyseal junction. Logically it would seem that the obliteration of the carrying angle may be attributable to any of the foregoing conditions, that is, fracture of the internal or external condyle, fracture above the condyles, or separation of the epiphysis.—*Occidental Medical Times.*

CEREBRAL ANEURISM, WITH REPORT OF A CASE.

The condition generally considered necessary for the development of aneurism of the systemic arteries, aside from traumatism, is a weakening of a limited portion of the arterial wall. This defect is the result of a local arteritis. The predisposing factors leading to this inflammatory process differ materially, in the case of the cerebral arteries and the arterial system of the other parts of the body. The latter are due to syphilis, gout, alcoholism, atheroma, thrombosis and embolism. Cerebral aneurism is caused almost exclusively by thrombosis and embolism; of these two, embolism is by far the most frequent. Whether the primary lesion is the result of a local inflammatory process in the wall of the artery, due to a diseased condition of its inner coat, or to the irritation of a thrombus or embolus, the pathological condition amounts to the same thing in the end. To whatever cause the inflamed arterial wall may be due, it results in a weakness of that portion involved, so that under the pressure to which it is subjected it gives way, permitting a bulging of the wall at the spot affected. This constitutes the initial pathological changes of all aneurisms. The character of the aneurism, whether it be sacculated or fusiform, depends upon the area of the arterial wall involved in the inflammatory process. If only one side of the wall be affected, the dilatation takes place at this point, for here the resistance is less than at other portions, with resulting sacculated aneurism. If the inflammatory process is due to the plugging of a vessel by a thrombus or embolus, the pressure being equally distributed over the arterial wall, the inflammation extends over the area subjected to such pressure. In this event the walls of the artery give way around its whole circumference simultaneously, resulting in a fusiform aneurism. It does not necessarily follow that all aneurisms arising in consequence of the plugging of the lumen of an artery are of the fusiform variety, for the pressure of the plug may be

unequally distributed and cause the aneurism to assume the sacculated form. I only contend that in the majority of cases arising from thrombus or embolus, the character of the aneurism is fusiform.

Nearly all aneurisms occurring under the age of 40 years are caused by embolism. In the majority of such cases the patient has suffered at some previous time from endocarditis, the vegetations arising from which have been dislodged, constituting an embolus. Owing to the fact that the current of blood pursues a straighter course into the left carotid artery than it does into the right, the embolus more frequently lodges in the left cerebral hemisphere. The order of frequency of the arteries involved, according to most writers, is middle cerebral, anterior cerebral, posterior communicating, anterior communicating, and the posterior cerebral.

On account of the necrobiotic process which takes place in the substance of the brain in consequence of the obstruction of a cerebral vessel, embolism of this locality is of far more serious import than that of any other part of the body. If the embolus is small enough to pass beyond the anastomosing branches of the cerebral arteries, it lodges, of course, in the terminal twigs, in consequence of which the blood supply to the area fed by such vessel is completely cut off. The process of softening now begins and goes on to the complete destruction of all the tissues to which the obstructed artery is distributed. Coincident with the destructive process going on in the brain substance, the embolus irritates the inner coat of the blood vessel, weakening its resisting power, and eventually causes the development of a small aneurism which sooner or later ruptures, permitting a hemorrhage to take place into the substance of the brain. The first hemorrhage is not necessarily fatal, as the opening in the aneurismal sac is sometimes minute, and after a small quantity of blood is poured out, the hemorrhage may cease spontaneously. A patient with a cerebral aneurism is doomed. A time comes, sooner or later, when a rupture of sufficient magnitude occurs to flood the surrounding parts, to plough up the healthy tissues, or break into the softened area and find its way into the ventricles of the brain.

The symptoms of embolism are sharp and sudden. In the midst of apparent health the patient is seized with violent headache, dizziness and a confused state of the mind. Temporary unconsciousness supervenes, and the patient falls to the ground. Hemiplegia occurs in the

majority of cases, and aphasia in nearly all. General or unilateral convulsions sometimes occur. If the patient recovers from the attack, the hemiplegia and aphasia persist indefinitely or for a considerable length of time. The mental symptoms which follow in the wake of cerebral embolism depend upon whether the cortical substance is involved. If the cortex is not supplied by the obstructed artery, there may be no derangement of the mental functions either as a result of the primary attack, or of the necrobiotic process which takes place later.

Through the courtesy of Dr. Charles E. Leithead, who had charge of the patient and who kindly invited me to participate in the post-mortem examination, I am enabled to report the following case :

F. L. R.—, aged 15, of healthy parentage, had an attack of endocarditis at the age of four years, from which he never fully recovered. On November 20, 1900, while working in the field, he was suddenly seized with violent headache, staggered, and fell to the ground. Shortly after falling he vomited several times. He was taken home and placed in bed, where he remained two weeks. For several hours he was in a semicomatose condition. Immediately after the attack it was noted that both pupils were dilated, but the right more than the left. This persisted for several days. There was marked ptosis of the right eye ; myopia and double vision, lasting for a period of two months. He had aphasia, not being able either to read, write or choose a word. This lasted about three weeks. There was no hemiplegia or convulsions at any time. After a period of about three weeks he was able to get out of bed, but he never regained his former health. He walked with a staggering gait and complained of a feeling of debility. Three months later there was a slight recurrence, which presented many of the symptoms of the former attack. It passed off, however, within a few hours, leaving him in much the same physical condition. On the evening of April 28, 1901, he complained of severe headache and went to bed of his own accord at 6.30 p.m. Before retiring, he passed about three pints of limpid urine. Began vomiting about eight o'clock, which continued during the night. Became aphasic at 2 a.m. on the 29th. Right pupil widely dilated ; ptosis of right lid. Pulse-rate and respiration were in no way affected. Although he could not speak, he seemed to retain consciousness nearly to the end. He died at 11.30 a.m., April 29.

A post-mortem examination was held at 5 p.m. on the day of death. The body was spare and somewhat emaciated. Lungs, liver, spleen, kidneys and alimentary tract

were normal. The heart was hypertrophied, the mitral valves presenting a mass of vegetations. A few vegetations were to be seen on the endocardium and the aortic valves. The calvarium was opened and the brain removed. At its base was a firm blood-clot. The surface of the brain presented nothing abnormal. It was placed in Orth's fluid until sufficiently hard, when sections were made to discover the source of the hemorrhage. The third, fourth and left lateral ventricles were filled with blood-clot. The right hemisphere presented nothing abnormal. On the left side, just beneath the cortex in the ascending frontal gyrus and near the longitudinal fissure, a fusiform aneurism of one of the terminal branches of the middle cerebral artery was found. Its diameter was about one-eighth of an inch, and its length about one-half inch. Immediately beneath the aneurism was a cavity about one inch in diameter filled with necrotic brain tissue and blood-clot. This cavity extended into the roof of the left lateral ventricle. By carefully washing the aneurism, a minute opening in its wall was found through which the blood escaped. The flooding of the ventricles was now explicable. The aneurism had ruptured and poured its contents into the softened cavity, and from thence into the lateral ventricle. From the lateral ventricle it passed through the foramen of Monroe into the third ventricle, and from the third ventricle through the aqueduct of Sylvius into the fourth ventricle.

As to the formation of the aneurism, there can be no doubt that it was caused by the dislodgment of a particle of vegetation from the mitral valves of the heart. This occurred at the time he had his first attack in November, 1900. The second attack, two months later, can be attributed to a slight hemorrhage from the aneurism which occurred at this time, but which was spontaneously arrested. That his mental functions were not in any way interfered with, after his recovery from the first attack, is explained by the fact that the cortical cells in the neighbourhood of the softened area were not involved as a result of the embolism or of the softening process. Many microscopic sections of the cortex in this locality showed normal cells throughout. Of course, the axis cylinders of all the neurons which passed through the softened areas were destroyed. Among these were undoubtedly many of the association neurons connecting the centres concerned in written and spoken language, as well as the motor neurons supplying the right eye; hence the persistent aphasia and the motor difficulty of the right eye. The

absence of hemiplegia is to be explained from the fact that the tissues to which was distributed the occluded artery did not happen to contain any important motor contracts.—H. H. Stoner, M. D., in *Medicine*.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

J. BRADFORD McCONNELL, M.D.

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LABORATORY METHODS IN DIAGNOSING TYPHOID FEVER.

It would seem that the diagnosis of the commonest fever in the temperate regions of the United States would be comparatively simple. One has only to recall the findings in relation to the typhoid epidemic that prevailed in our camps during the Spanish-American war to learn that the recognition of typhoid fever is by no means as easy as is generally believed. There seemed to be among those who had charge of the troops a deplorable ignorance of the general clinical type of the disease. We are not now speaking of the doubtful or complicated cases, but those in which the typical symptoms of typhoid fever were fairly marked. The merest tyro in medicine could not mistake the continued fever with the evening rise, the rose spots, and gradual onset, with gurgling in the right iliac fossa, for anything but typhoid. But a large number of the cases begin in an atypical fashion. In some cases the temperature may not be marked, or if so, it may present the continued type or be higher in the morning than in the evening. There may be extreme pain in the abdomen, with distention, simulating a peritoneal or other abdominal inflammation. The anomalous cases of typhoid are probably the most frequent, and it is in these that laboratory methods are of the greatest value.

The most important of these tests is that of agglutination, known as the Widal. Unfortunately, it is hardly ever present before the beginning of the second week. The findings with this test are not conclusive. If it is not found when persistently looked for, it is strong evidence

that the disease is not typhoid, as it is present in 95 per cent. of cases. Hence the negative Widal reaction is of value only in excluding typhoid. The positive reaction does not show conclusively that the disease is typhoid, as the reaction may persist months and years after the person has had typhoid fever. Unfortunately, the Widal test cannot be carried out at the bedside and is not within the reach of the general practitioner. Many of our boards of health have undertaken the application of the test.

The diazo-reaction is a test which is easily performed, but unfortunately it is of comparatively little differentiating value. It is obtained in cases of septicemia, tuberculosis, and in other conditions which may be confounded with typhoid fever. It is the best method by reason of its simplicity and the rapidity with which it can be carried out, and should be made, as it may throw valuable light upon the case.

The leucocyte count is one of the most valuable differential diagnostic points in typhoid fever. In uncomplicated typhoid the leucocytes are always diminished, the average being five thousand or less. Taken in connection with the clinical symptoms, the diazo and the Widal test will often enable one to differentiate typhoid fever from suspicious abdominal conditions that would suggest the advisability of operation. The leucocyte count is of no value in determining the diagnosis of certain fevers in which there is no increase in the leucocytes. It will not distinguish between malaria and typhoid, for neither of these is accompanied by a leucocytosis; but it will enable one to differentiate with a considerable degree of accuracy between a general septicemia or peritonitis and typhoid fever. If marked leucocytosis is present, as high as ten thousand or over, the disease under consideration is probably not typhoid, and is certainly not an uncomplicated typhoid.

The typhoid bacillus has been found in the blood, urine, and feces of typhoid patients, and with the help of a man trained in bacteriological research and an excellent outfit, this is a direct means of making the diagnosis. Unfortunately, they are far beyond the average clinician; even in the best hospitals they are so difficult of application that little is done with them except in original research. Every year a few cases of unrecognized typhoid pass through our best hospitals and appear on the autopsy table. How frequently is typhoid unidentified in private practice. Much oftener than is generally supposed.—Edit. in *Medicine*.

TANNOFORM IN THE NIGHT SWEATS OF PHTHISIS.

A. Nolda, in the *Berliner Klinische Wochenschrift* of July 1, 1901, gives the history of eight cases of phthical night sweats which were treated with tannoform. In seven of the cases there was a disappearance of the symptom, and in the eighth case there was improvement. In consequence the appetite improved, and it was no longer necessary to give atrophine, the omission improving the general condition. In two cases there was slight burning and itching of the skin.

Tannoform, which is the condensed product of tannin and formaldehyde, was used in the form of a powder, one part of tannoform to two of talcum. The powder was rubbed into the breast and portions of the body which commonly give the greatest amount of transpiration.—*Medicine.*

INEBRIETY.

C. L. Dana, New York, gives further details regarding the development of the inebriate. In his discussion he shows the rather definite limitations of life of the sot and the periodical inebriate, the maximum capacities of the human body for alcohol, the methods of prevention, the necessity of a special law for the commitment and care of inebriates, and the treatment, temporary and permanent, of this class. He has found the acute effects of hard drinking to be distributed about as follows: Simple intoxication, 60 per cent.; delirium tremens, ending in recovery, 36 per cent.; delirium tremens, with complications ending in death, 4 per cent. These acute conditions occurred in persons suffering from what may be in general termed inebriety, which took the form of periodical inebriety in about 10 per cent.; chronic or neurasthenic inebriety in 20 per cent.; ordinary drunkenness or besottedness in 70 per cent. The agencies for preventing and lessening the injury done by alcohol consist in: 1. Teaching. 2. Control of the sale, making it impossible to secure impure alcohol and difficult to secure even good alcohol, and especially difficult for those to whom it is poison. 3. Avoidance of transmission of degeneration through the marriage of alcoholics. 4. Personal supervision of those who become inebriates. The treatment is considered under the classification of the ideal and the practical. The former is supervision of the case in an institution, ensuring absolute abstinence from alcohol in all forms for at least one year, and further ob-

ervation for two years longer. Under present conditions all kinds of makeshifts have to be resorted to, the most common form being the "cure." These cures have all the same basis, consisting in the use of strychnine, atropine and apomorphine or some other nauseant, combined with tonics, laxatives, full feeding, and the psychical influences exercised on the patient by the procedures of the cure.

ON THE HOME TREATMENT OF PULMONARY TUBERCULOSIS.

L. Weber, New York, states that by physical exploration, including bacteriologic examinations, we can generally soon arrive at the positive diagnosis of the early stage of pulmonary tuberculosis. So long as we have to go without a sure and readily made serum diagnosis for incipient tuberculosis, let us give a suspicious case the benefit of the doubt, and rather treat the patient as if he were infected with tubercle than give him medicine for latent malaria. The first order given in a case of fresh febrile tuberculosis is that the patient should go to bed and stay there until his temperature is practically normal. Rest cure at the outset, to be repeated at intervals according to the circumstances of the case, and careful nursing are essential for successful treatment. The patient's room must be well above the ground, must admit plenty of light and air, and be easy to ventilate. Food, selected according to the condition of the case, is given every two or three hours in small quantities, or in the shape of meals four times a day as soon as the patient is able to take and digest them. In the early stages, and at all times, it is of moment to keep down high temperatures, for which acetanilid, phenacetin and antipyrin are advised. In fresh cases, with general irritability and harassing cough, remedies appropriate to a case of acute bronchitis with fever and cough should be given in preference to creosote or similar drugs. When the acute symptoms have subsided, or when they are absent, creosote is prescribed. For the class of patients who show phthisical habitus have poorly developed muscles and weak hearts, cardiac tonics, such as strychnine, with or without digitalis and quinine, are indicated. Whenever a stage of improvement has been reached where it appears timely and opportune to send the patient out of the city to continue the plan of treatment it should be done. The author has treated one hundred and ten private cases, according to the above outlined plan; for every one creosote was ordered as the remedy to be taken steadily and for a long

time, and at least four-fifths of them took it without objection or disgust ; about one-fifth could not or would not take it, but had carbonate of creosote in capsule or carbonate of guaiacol in powder in sixteen-grain doses t. i. d. instead. Fifty of the whole number have been restored to health and twenty are greatly improved, while thirty have died of phthisis pulmonalis.—*St. Louis Medical Review*.

AORTIC REGURGITANT MURMUR.

H. W. Syers claims that in at least 95 per cent. of the cases in which aortic reflex occurs the diastolic murmur is heard much more loudly at the second left interspace close to the sternum than in the position usually assigned to it—namely, the second right interspace. This accounts for the fact that aortic reflex murmurs are constantly overlooked. He does not claim that the second left interspace close to the sternum is the locality at which it is most loudly heard, but that it is more distinct there. The point at which the murmur is loudest is almost invariably the middle of the sternum, and it is frequently very loudly audible just above the xiphoid cartilage.—*St. Louis Medical Review*.

THE HEART IN TYPHOID FEVER.

Bacaloglu points out that cardiac complications of typhoid are not confined to myocarditis, since there also exist typical cases of endocarditis and pericarditis. The anatomic changes in myocarditis vary in character and intensity. In mild cases there is a granular condition of the protoplasm, a coagulation exactly comparable to that produced by heat. This is sometimes accompanied by multiplication or hypertrophy of the nuclei. In severe myocarditis there is an increase of sarcoplasm, disappearance of transverse striation, and vacuolization of the muscular fibres. In grave cases there may be found the segmentation described by Landouzy and Renault. The inter-cellular cement softens and there is actual fragmentation. The importance of the latter lesion is minimized by the writer. Fatty degeneration is exceptional. Arterial changes are important. They consist mainly in an endo-and peri-arteritis. Venous lesions are rare.

The prognosis is grave when the number of pulsations go above 110. But, before this acceleration, muffling of the first sound can be noted. The first sound is prolonged and weakened, but the cardiac rhythm is not at first altered.

Sometimes a slight systolic murmur is observed. Embryocardia succeeds the weakening of the first sound. It is characterized by indentity of the first and second sounds and equality of the long and short pauses similar to that of the fetal heart. The pause becomes thready and rapid. This condition may be only transitory, or it may be accompanied by collapse and death.

The galop bruit may be met with. It evidences weakness and dilatation of the right ventricle.

Arterial tension is lowered in typhoid fever, and reaches its minimum at the beginning of convalescence. Arrhythmia occurs occasionally, usually along with the galop bruit. It is the rule at the moment of convalescence.

Typhoid pericarditis may exist alone; more often it accompanies endocarditis. The pericarditis may be purulent, or dry, or with effusion. Clinically, it is revealed by friction sounds at the middle and base of the heart.

Endocarditis comes on about the second week, and ordinarily is localized to the mitral and tricuspid orifices. murmurs. Pain is rare.

The general treatment of typhoid depends mainly upon the baths, and they should not be suspended unless the cardiac lesion is marked. In endocarditis and pericarditis they should be stopped. Local revulsives are useless in myocarditis. Digitalis is best given in fractional doses. It is hardly as good as caffeine, which may be given hypodermatically. Sparteine and ergot may also be employed. Artificial serum acts well in raising arterial tension and increasing renal elimination.—*St. Louis Medical Review.*

THE SEMEIOLOGICAL VALUE OF THE EXAMINATION OF THE BLOOD IN CANCER OF THE STOMACH.

Hartmann and Silhol (*Rev. de Chir.*, No 2, 1901) have recently communicated to the Société de Chirurgie de Paris the results of some researches made on the blood of surgical patients. In the course of these researches they have been convinced that in cases of cancer of the stomach, an examination of the blood is more likely to prove useful than a chemical investigation of the gastric contents. The authors, in their studies, made a particular investigation on two questions: (1) the degree of anaemia characterized by diminution of the quantity of hemoglobin, which may depend on the reduction of the number of globules, or on the reduced proportion of hemoglobin in their contents;

and (2) the existence of leucocytosis. The presence of cancer of the stomach, it is held, is indicated by a well-marked association of decided anaemia with decided leucocytosis. Anaemia is marked less by the diminished proportion of the hemoglobin in the globules, than by (1) a diminished proportion of the hemoglobin in the globules; (2) by irregularities in the form of the globules, indicating a profound modification of the elasticity and texture of the red globules; and (3) by inequality in the size of those globules that are not misshapen. The leucocytosis, to have any value as a symptomatic sign, should be very marked, and should affect especially the mono-nucleated cells.—*British Medical Journal, March 23, 1901.*

CARDIAC DRUGS AND THE VASOMOTOR TREATMENT.

The paper by Prof. Gottlieb, of Heidelberg, has been specially translated for the *Medical Press and Circular*, July 24, 1901.

Seeing that circulatory disturbances have for result to determine an unequal distribution of blood in the organism, the object of cardiac and vasomotor treatment must be to restore the equilibrium thus destroyed.

Paralysis of the blood vessels, due to the insufficient central innervation of the vasomotor centres, causes the blood to flow into the abdominal vessels, while the peripheral vessels and those of the skin and brain are depleted; the pulse is feeble, and the heart only receives an inadequate supply of blood during diastole. This variety of circulatory inadequacy occurs in cases of intoxication resulting from the use of narcotics and during attacks of infectious disease. In such cases the exhibition of cardiac drugs would generally be without effect, since it is not the strength of the heart that is lacking, but that the quantity of blood which it receives is insufficient. But the blood, withdrawn from the action of the heart and accumulated in the dilated vessels of the abdomen, can be brought back into the general circulation by the use of drugs acting upon the vasomotor system, through which they give rise to contraction of the vessels in the splanchnic area. To obtain this result, strychnine, camphor and caffeine are prescribed. Much the same result may be obtained by irritating the skin, or by making cold applications.

Cardiac drugs are used for the purpose of restoring the energy of the heart. They increase the volume of systole, and in this manner tend to remedy the defective distribution of the blood in the organism, which is the

usual consequence of most complaints of the heart, accompanied by a diminution in the energy of this organ, an accumulation of blood in the venous system and anaemia of the arteries being the inevitable result of incomplete systole and of insufficient ventricular diastolic aspiration.

Digitalis acts chiefly by strengthening the energy of the heart ; its vasomotor effect is of secondary importance. From experiments made on the heart of a frog, it was long since observed that the cardiac systole increases, and that the energy of the ventricular contraction is strengthened under the influence of *digitalis*. Recently we have succeeded in making the same experiment on warm-blooded animals in whom the heart was protected from the variable resistance of the general circulation. We are, therefore, no longer compelled to base our conclusions on experiments made upon frogs. By isolating the cardio-pulmonary circulation, following the example of François-Franck and of E. Hering and Bock, we are enabled to study the action of *digitalis* on the heart, independently of its effect on the vessels ; we can also make use of a separated heart, in which the functions are maintained by an artificial circulation through the coronary vessels. I have by the aid of a special arrangement I satisfied myself that, an increase in the volume of the systole takes place, and after a dose of digitoxin, the energy of the ventricle is trebled or quadrupled.

The increase in the volume of the systole is caused more particularly by a more complete contraction of the cardiac muscle ; the ventricle emptying itself with greater facility. This action is the more important in connection with an ailing heart, since a failing ventricle becomes less capable of getting rid of its contents. Moreover, the slight diminution in the frequency of the pulse, due to the diminution of the pneumo-gastric, which occurs in addition to the more strictly cardiac effect under the influence of *digitalis*, has a beneficial influence on the cardiac function. The diastolic aspiration of the blood of the veins into the cardiac cavity is also favourably influenced by this slowing of the pulse. Consequently the efficacy of *digitalis* becomes very evident, in proportion as this slowing effect is manifested. The maximum effect of this treatment corresponds to complete expansion of the ventricles during diastole, plus a maximum contraction during systole. The heart in this way pumps a greater quantity of the blood which is contained in the over-filled veins, and propels it into the bloodless arteries.

All drugs acting in a manner analogous to digitalis have, in addition to the action on the heart, a vaso-constricting effect, as I was able to demonstrate anew in my recent experiments. But this vasomotor action is accessory, from a therapeutical point of view; the important factor in combatting venous stasis is an improvement in the cardiac function. The vascular contraction may be of some utility in the sense that the blood is thereby driven out of the congested portal system into other parts of the vascular system, for, in the first instance, it is principally on the portal vein that the vascular action of digitalis is produced; but, if this contraction exceeds certain limits, its beneficial effect is transformed into one very inimical to the organism, since, in consequence of the rise of arterial resistance, the work of the heart is needlessly increased.

Camphor does not only act on the heart indirectly through the vasomotors, it also directly increases the irritability of the cardiac muscle. Its action on the normal heart is little marked; on the other hand, I was able to convince myself, in the case of the rabbit, that under certain pathological conditions, when the heart ceases to beat, it is possible by the application of camphor to combat this momentaneous stoppage and to save the rabbit's life.

Caffeine has a direct effect on the heart, but one quite different from that of digitalis, nor can it be considered as a substitute for the latter. As a matter of fact, it does not increase the functional energy of the healthy heart in cases where the blood tension is normal, but it strengthens the action of the cardiac muscle in the presence of a pathologically high arterial resistance; it may also be useful in cardiac complaints accompanied by a high aortic tension.

Alcohol has not a direct influence over the heart; it acts indirectly on this organ by diminishing the peripheral resistance, when, in consequence of an exaggerated aortic tension, the left ventricle can no longer completely empty itself. In this case it causes the vessels to dilate, and the resistance to diminish, and as a result whereof the heart carries on its work under more favourable conditions, and is enabled to furnish a greater amount of work.

The various cardiac drugs, it will be seen, act on the circulation in quite a different manner to those which act in the vasomotor system. In spite of the difficulties that present themselves in the study of so complicated a mechanism, we may hope that by associating clinical observation with experimental pharmacology, we may succeed, little by little, in gaining a deeper insight into the nature of the circulatory troubles which present themselves

to our notice, and to choose with more discernment the treatments capable of combatting these troubles and of restoring the equilibrium.—*The Virginia Medical Semi-Monthly*.

NOTE ON A PRE-ANTHEMATOUS SIGN OF MEASLES.

After a mention of Koplik's sign, of the minute, round, discrete, bluish-white specks on a reddish or diffuse red background in the mouth, the author states that in many cases no distinct red spots are to be seen, but the white specks look like particles of salt lying on the surface of the reddened mucous membrane. These white spots are adherent, but may be rubbed off, leaving a smooth, pink surface. The buccal mucous membrane, not that of the palate, is the place where their presence should be sought.

These spots appear from twelve hours to three days before the skin exanthem. They generally begin to fade as the skin eruption becomes well developed. He has found this sign of great value in arriving at an early diagnosis of measles. He is unable to say from his personal experience whether these spots are absolutely pathognomonic.

He does not agree that all cases without the spots are cases of rotheln, but he is convinced that when spots are present, they invariably indicate the existence of morbilli.—*Bristol Medico-Chirurgical Journal*.

THE HYDRIATIC TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS AT HOME.

H. Meffert (*Deutsche Med. Woch.*, May, 1901) says that the value of this method of treatment has been universally recognized, and describes a simple means of carrying it out in the homes of patients. The bed is first covered with a woollen blanket sufficiently large to envelop the patient from head to foot, and on top of this are spread two smaller blankets, one long enough to reach from the chin to the hips, and the other from there to the feet. Over these a sheet is spread, and the patient is wrapped up in the manner customary for a dry pack, lying quiet until thoroughly warm. The coverings of the upper part of the body are then loosened, and the arms and trunk rapidly sponged off by one or, preferably, two attendants, and the wrappings restored without drying, after which the lower extremities are similarly treated, the whole procedure not taking more than one minute. In this, which is virtually

a wet pack, the patient is allowed to remain till he feels perfectly warm and dry again, when he is released, and is stood up by the bedside with his feet in a tub of warm water. The entire body is then showered with water from an ordinary watering-pot for a period of not more than thirty seconds, is rapidly dried, and dressed.

The treatment should be carried out twice a day, the first time in bed before rising in the morning, and the second time between four and six in the afternoon. The preliminary period of warming up is very necessary, as thereby all subsequent shock is prevented. Considerable care is also required in determining the temperature of the water to be used for the sponging and showering, in each case.—*Medical Record, June 8, 1901.*

GLYCOSURIA AND DIABETES OF DYSPEPTIC ORIGIN; THEIR SYMPTOMS AND TREATMENT.

The author remarks that when in cases of dyspepsia glucose has been found in the urine, it has invariably been attributed to an excess of sugary matter taken with the food. The author regards this form of glycosuria as being the result of gastric and hepatic dyspepsia, and as quite unconnected, on the one hand, with alimentary glycosuria, and, on the other, with true diabetes. This dyspeptic glycosuria comes and goes with great irregularity; the sugar may be absent one day and present the next. When present, too, the quantity varies extremely, but is never large. It is a very important point that the sugar is not passed all the day long; it is wanting in the morning urine, and is, in fact, only present in the urine of digestion. Not seldom albumin accompanies the sugar in these cases; out of 48 observations albumen was detected in no less than 39. The quantity of the urine is slightly increased and the density somewhat varied, being on an average 1.025.

The patient suffering from dyspeptic glycosuria does not present any of the symptoms of diabetes, and the glycosuria is nearly always discovered accidentally. As in true diabetes, all the metabolic processes are in excessive activity, and hence in these cases also the amount of nitrogenous waste is much increased. The *symptoms* presented by this form of glycosuria, though differing greatly from those of diabetes, are yet sufficiently marked to admit of ready detection. The patient complains of increasing appetite, of distension of the stomach and of pain after food; the liver is not seldom somewhat enlarged. Neur-

asthenic symptoms are sometimes met with, together with the passage of phosphatic urine; profuse sweating may occur; skin lesions are not seldom present, and many patients complain of cardiac troubles. The general condition offers no characteristic features. Some patients become stout, others complain of wasting; anaemia is rarely observed. The diagnosis can only be made by observing and comparing all the various physical signs and symptoms. The identification of this form of digestive glycosuria does not in any way make less certain the recognition of a form of the complaint to which the author gives the name of dyspeptic *diabetes*.

These cases suffer from severe gastric symptoms, and at the same time from those of diabetes, and the inference is that the diabetes is the result of the dyspepsia. But it is admitted that this form of glycosuria is very apt to pass into true diabetes. This form of diabetes, when correctly treated, is, the author remarks, capable of being completely cured, and to effect a cure the author strongly recommends the employment of a rigorous milk diet. As regards the *treatment* of dyspeptic glycosuria, a milk diet is also advocated. As regards drugs, the author recommends anti-pyrine and bicarbonate of soda, opium or codeine, arseniate of soda or valerian.—*The Post Graduate*.

EUCAINE IN SPINAL ANALGESIA.

Dr. Jedlicka, of Prague (*Sbornik, klin.* Vol. II., No. 3), has tried cocainization of the spinal cord in seven cases, and has had unpleasant experiences with the drug. He therefore replaced it with eucaine (alpha-eucaine hydrochlorate). This he employed in 93 cases of laparotomies of various kinds; operations on the lower extremities, perineum and scrotum, and in various gynaecological operations with very excellent results.

The injection was always carried out with technical precision, and there occurred, after four minutes, an analgesia beginning at the feet and proceeding up the body in segments. In seven to ten minutes it had reached the navel or even the breast. The extension of the analgesia does not depend upon the dose, but upon the diffusion of the eucaine in the cerebro-spinal fluid. This can be favoured by placing the patient in an appropriate position, employing a proper amount of the solution, and diminishing the pressure of fluid within the canal. It is, therefore, well to allow a little of the fluid to escape before making

the injection ; at least as much as the amount to be introduced should be allowed to run out.

The phenomena that occur after the injection may be divided into three phases. The first is the stage of analgesia, which usually begins four minutes after the injection, and is heralded by formication and numbness of the lower extremities. In some cases paralytic symptoms appear also, such as a feeling of weight and heaviness in the legs ; but very rarely is there complete paralysis. The heart may be slowed or increased, but is otherwise, save in the aged normal. In fact, this method of anaesthetization had better be avoided in old persons. Other symptoms noted were nausea and vomiting (only when the stomach was empty), paresis of the sphincter ani, dermographism and erection of the penis.

During the second stage the patient feels quite well, and is in normal condition.

The third stage begins three to six hours after the injection, and is characterized by headache and increase of temperature. After three hours these symptoms cease ; in exceptional cases they last until the next day. The author believes that they appear in consequence of reaction of the membranous envelopes of the cord. If the headache is very severe the patient can be relieved by lumbar puncture and the removal of a little cerebro-spinal fluid. The relief is absolute ; and the headache can be prevented by letting a little of the fluid of the cord escape before making the injection. This procedure has some influence upon the rise in temperature also.

Experiments with the injection of indifferent fluids in dogs have proved that spinal analgesia cannot be effected with them, especially as no destructive action upon the cord must be caused.

The author recommends spinal analgesia, as effected at Maydl's Clinic, in the very heartiest manner. It is an excellent method, that entails no serious danger. It is of inestimable value in patients suffering from heart and lung disease, to whom ordinary narcosis would be extremely dangerous.—*The Medical Times and Register.*

ACUTE NEPHRITIS IN CHILDREN.

W. M. Powell, in "Diseases of Children," says the treatment consists of rest in bed between blankets, milk diet, water drunk freely, and, at the start, a calomel purge followed by a mild saline, such as liquid citrate of magnesia. The body may be sponged with warm water, or

a warm bath given once or twice a day, precautions being taken to avoid chill. A non-irritating diuretic is the citrate or bitartrate of potassium, which may be given in water with lemon-juice and sugar. The severe cases with dropsy, fever and suppression of urine must be treated actively by dry cups on the lumbar region, by purgation with an active saline (magnesium sulphate), and by free sweating by a hot-air bath or hot pack. A daily irrigation of the colon with normal salt is of value. If uremic symptoms set in, bleeding is the most certain means of relief, two to six ounces of blood being drawn from a child of five years. A full and bounding pulse requires nitroglycerine; threatened convulsions demand bromides and chloral by enema. The patient should be confined to bed as long as there is a trace of albumin in the urine, unless chronic nephritis is seen to have developed. The post-nephritic anemia calls for iron, preferably Basham's mixture.—*Medical News.*

THE INFLUENCE OF THE DIGESTIVE PROCESS UPON THE REACTION OF THE URINE.

It having been affirmed that in cases of hyperchlorhydria the acidity of the urine was increased, the author has investigated this question with the view of showing that it is erroneous to regard the urine as hyper-acid in such cases.

The results obtained show that in cases of excessive acidity of the stomach the normal rule is followed, that, viz., which establishes a relationship between the acidity of the stomach and that of the urine, the acidity of the two varying inversely. In other words, when the acidity of the stomach is greatest, as after a full meal, that of the urine is least, and *vice versa*. This relation holds in cases of hyperchlorhydria as in all others.

In the discussion which followed, attention was called to the fact of the frequent high specific gravity of the urine in cases of dyspepsia. These high gravities, though often thought to be due to the presence of sugar in some form, are, as a matter of fact, not connected with its presence, but they may end by the development of saccharine diabetes. Such conditions of the urine are not infrequently met with in those who habitually eat and drink more than the needs of the economy justify.—*The Post Graduate.*

SURGERY.

IN CHARGE OF

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THE SELECTION AND STERILIZATION OF MURIATE OF COCAINE FOR SPINAL ANAESTHESIA.

W. C. Riley, San Francisco, states that, in choosing a muriate of cocaine, one should select that occurring in anhydrous, well-defined, rather large, colourless and nearly odourless crystals. Each original package, after the crystals have been reduced in a mortar to a moderately fine powder, should be subjected at least to a very elementary test for the detection of isotropyl-cocaine, the most deleterious of all constituents the cocaine is liable to have, because it is a very active cardiac depressant. The method of sterilization advocated is as follows: Carefully selected muriate of cocaine is broken in a mortar into moderately fine fragments and heated in a dry sterilizer to 110° C. for about twenty minutes and then bottled in a clean, dry bottle with a tightly fitting rubber stopper. This insures a dry salt to begin with, which is essential for the after-process. Small graduated vials or glass tubes are taken and carefully cleansed, dried and flamed, and when cool, such an amount of the cocaine is weighed off into each as will make, when the vials are filled to a mark with sterilized water, a 2 per cent. solution. The mouth of the tube is then closely stoppered with a plug of dry, sterilized absorbent cotton. It is then placed in a dry sterilizer and the temperature gradually raised to from 145° to 150° C. and maintained at that temperature for from ten to sixty minutes. After cooling, the vials may be taken out at one's leisure and the cotton plugs replaced by sterilized rubber stoppers or ordinary well-fitting corks, which have been plunged in a wax resin mixture heated to 170° C., or the end of the tubes softened in the flame, drawn out and sealed. This method insures perfect sterility, the product lasts indefinitely, there is no need to weigh or measure the cocaine or water at the time of operation and the preparation is absolutely efficient. —*N. Y. Med. Rec.*

**THE SUTURE OF WOUNDS OF LARGE BLOOD VESSELS,
WITH REPORT OF CASE OF RECOVERY AFTER
SUTURE OF A WOUND OF THE AXILLARY ARTERY.**

A. E. Halstead, Chicago (*N. Y. Med. Rec.*, July 20, 1901), while freeing the axillary artery which was adherent by its fascia to a cancerous tumour which he was removing, accidentally cut the artery obliquely through about two-thirds of its circumference. The violent hemorrhage was controlled by placing the index finger under the artery and pressing it up against the clavicle. During a previous operation all the branches of the axillary artery excepting the circumflex had been cut, leaving practically no chance for collateral circulation being established, so that suture of the artery presented the only chance of saving the arm. Four interrupted catgut sutures were passed through the two outer coats of the vessel and tied. This effectually closed the wound in the vessel, so that no hemorrhage followed removal of pressure from the artery. The radial pulse was immediately restored, and was as full as that of the other side. Two months after the operation there was still a radial pulse on the left side of a volume equal to that on the side not operated upon. After briefly reviewing the work which has been done heretofore, the following indications for arterial suture are given: In all cases of injury to a vessel or vessels, where a ligature might bring about serious nutritional changes to the part supplied by the injured vessel. This is especially apt to occur where the corresponding vein is injured at the same time. An effort should be made to restore both vessels. In all wounds of large vessels produced by puncture, gunshot or laceration, or in operation wounds of large vessels, accidental or intentional, as when a part of the vessel must be sacrificed, suture may be indicated. If the wound involves only one-half the circumference of the vessel, either oblique or transverse, simple suture is only required. If more than half of the circumference is involved resection and end-to-end union will constitute the best method of treatment. In the medium-sized and small vessels, suture is not indicated, for there is no danger of a necrosis if the vessel is ligated. The flow of blood may be temporarily controlled by elastic constriction, digital compression, temporary ligation, and pressure by properly protected hemostatic forceps. Temporary control of the circulation may be secured by passing a loop of tape around the vessel and twisting it until the lumen of the vessel is closed, and then holding the tape by means of an artery forceps, ap-

plied close to the vessel. In this way the vessel wall is not injured, the ligature can be quickly removed after the suture is completed, and the hands of an assistant are excluded from the field of operation. After suture of any large vessel the operation wound should be closed by buried sutures of catgut without drainage. The accurate coaptation of the edges of the wound will materially support the injured vessel and act as a safeguard against hemorrhage.—*St. Louis Medical Review.*

COMPRESSES OF SODIUM BICARBONATE IN SUPPURATIONS.

M. Wladimirov (*Gazette des hospitaux ; Revue medicale*, June 19) says that, in burns, compresses of sodium bicarbonate rapidly arrest suppuration and promote cicatrization even in cases rebellious to all other treatment. Moreover, this dressing gives excellent results in wounds which heal rapidly without suppuration, by causing the resulting scar to be almost inappreciable. In abscess and panaritium the results are equally satisfactory. Compresses may be applied as moist dressings, either renewed every day, or by moistening *in situ* twice or thrice daily or again by placing between the compress and the outer covering a compress covered with boric vaseline to prevent evaporation ; in this last case the dressing may be left in place for two days. The principal advantages of this dressing are its absolute innocuousness and its analgetic and antiseptic action, which render it invaluable in practice with children.—*N. Y. Med. Jour.*

SKIN-GRAFTING UNDER LOCAL ANAESTHESIA.

Gaston Torrance, in the *Philadelphia Medical Journal* of July 13, 1901, describes a method of skin-grafting which is carried out without the use of a general anaesthetic. Local anaesthesia is accomplished by a spray of ethyl chloride. A number of cases are reported, one of which was a man 30 years of age, with a severe burn which involved the whole circumference of the arm. The involved area was thoroughly cleansed, and at the same time the thigh was washed and sterilized and then washed with alcohol and ether to remove grease. An area, one and a quarter inches in diameter, was anaesthetized with the spray, and from it a section of skin was removed with a razor, and immediately applied to the arm. As the frozen

graft was applied to the granulating surface it immediately thawed and closely adhered to the surface. In doing the grafting a portion of the corium is removed with the epidermis. The method is advised because it is painless; it admits of several grafts being applied at one time, and avoids a general anaesthetic.—*Medicine.*

LUMBAR PUNCTURE IN THE DIAGNOSIS OF CRANIAL FRACTURE.

M. Tuffier, before the Société de Chirurgie (*La Presse Medicale*, Aug. 3, 1901), reported three cases of grave traumatism of the head in which it was difficult to determine the exact nature of the lesions. In all of them he made a lumbar puncture for the purpose of obtaining the cerebro-spinal fluid, hoping that it might throw some light upon the nature of the cerebral trouble. In two of the cases the fluid was red, due to admixture with blood. From this he concluded that two of the cases had sustained a fracture of the cranium. This diagnosis was confirmed by the death of both patients. The third patient, a woman 62 years of age, whose cerebro-spinal fluid was clear, made an excellent recovery. The results in these cases confirm the belief that lumbar puncture is of value in diagnosis of cranial traumatism; by it we may be able to diagnose fracture, and to some extent predicate the severity of the lesion by the colour of the fluid. There is a possibility that this procedure may also be of value in therapeutics of head injuries, by subtracting a certain amount of the fluid from the sub-arachnoid space and thus lessening intra-cranial pressure.—*Medicine.*

THE USE OF ASEPTIC ADHESIVE STRIPS IN THE CLOSURE OF WOUNDS.

Thos. I. Motter, M. D., of Chicago, says: My attention was first called to this method of wound closure by an article by Lilienthal, of New York, who had been using it extensively in his hospital work. The advantages which are offered to the surgeon by such a method, if it can be made to meet the demands of asepsis and strength, are many, the two most prominent being the lessening of wound infection from sutures and the diminishing of the amount of scarring. We all know the great danger of infecting an otherwise clean wound by means of the skin sutures, the sutures themselves acting as a means of ingress to the bacteria, and again by passing through an

infected layer of skin which the antiseptic methods of to-day have as yet been unable to reach and render aseptic. This last fact has been so clearly demonstrated that it is only a wonder we do not more often have infection from this means than we really do.

The second advantage to be derived—the lessening of the scarring—is one of almost as great interest as the first. How often we see the results of an operation on the neck, face or hands of a patient, indelibly stamped there by the suture marks. A scar which, if it were a simple line, would not be half so noticeable, is made prominent by the peculiar markings of the stitches that were used. To be able to avoid such a scar would not only be pleasing to the patient but equally so to the surgeon. By this method such results are possible. There are many other points of advantage of less weight—as the doing away with removal of sutures—a source of no small dread to many patients; the avoidance of nerve impingement; the ease and rapidity of applying and the ability to reapply at future dressings when no general anaesthetic is used. Again, in wounds of the face and hands it renders a great help to the surgeon—as by its use he can thoroughly and evenly approximate the tissue without the use of sutures, a great relief to the patient.

The use of adhesive plaster in this manner has been tried before the present time, but as many times abandoned from its uncleanly nature—making a most undesirable wound. Experimenting has been done in this country and Germany to make an antiseptic adhesive plaster, but up to the present time has failed, owing to the fact that the process of sterilizing the plaster destroyed its adhesive value. The work has had its reward, and to-day we have the desired plaster, both aseptic and adhesive in nature. The plaster is made under the name of “zinc oxide aseptic strips.”

I began the use of these strips cautiously, using them first to close wounds of the hands and such minor work. The results there led me to try them in my major work. The first major case I used them on was a unilateral pyosalpinx, which was removed by an abdominal incision. The usual procedure of closure of peritoneum and muscle fascia by catgut was followed, then we had a gaping skin wound an inch in width. This was held together by an assistant, after the surrounding skin surface had been thoroughly dried, and the strips, one-quarter inch in width, applied across the wound at right angles to the incision. The result was perfect—healing by first intention and a

scar you could hardly notice. This result led to my adopting it in general surgery wherever possible. I used it in various laparotomies and in appendectomy—in amputations and hernia operations—with all like pleasing results. The cases were all clean and remained so.

When once applied properly it will hold against a great deal of tension, as I fully demonstrated in a case where stretching of the sciatic nerve was done for sciatica. The incision was over the gluteal fold, and when we came to close it we found much tension to overcome. The strips were applied while the wound was held firmly approximated and by careful application the wound was held securely together.

Where drainage is needed they can as readily be used—allowing the gauze or drainage material sufficient room at the lower margin of the wound. This procedure, in a case of appendicitis where a good deal of oozing was present, worked very satisfactorily. The drainage was removed on the third day and the opening approximated by a strip of the zinc oxide plaster.

There were a few points of value gained by experience. My usual procedure was, after the deeper tissues had been united by sutures, then the external surface was thoroughly dried. For this I used alcohol on a sponge. I found better approximation could be made by 1-4 inch strips, applying them about the same distance apart, than with wider strips. This gave a view of the wound at any time. In case one should want to be removed to be applied a little closer it was much easier and not so liable to disturb the rest of the wound as when using the broader strips.

After applying the strips the usual dry dressing of iodoform, aristol or boric acid was applied and the usual pad and dressings followed. In applying the first strip an assistant holds the tissues well together, and applying one end of the strip to the skin surface, the other is carried across the incision, being held tight and applied to the skin surface on that side of the wound. It is best to apply the centre strip first and work toward either end of your wound. Should any of the strips be put on too loose the first time one end can be readily raised and drawn more snug and again applied. These strips were left on from seven to fourteen days. In case you should have reason to examine the wound you can readily do so by removing the pad and dressings and even further by lifting one end of a strip so as to expose the wound beneath.

Not the least trouble was experienced in removing the strips. The best method is to loosen both ends and

gently free them just to the margin of the wound, then taking them both together they can be freed from the wound itself with no danger of pulling it open. In case the strips should stick, a little peroxide of hydrogen applied to them will cause them to be readily and easily removed. My own results have been so satisfactory that I feel free in urging others to try this method—feeling sure they will be gratified by the results obtained.—*Pacific Med. Jour.*

WHAT IS TRUE CONSERVATISM IN THE TREATMENT OF APPENDICITIS ?

By Dr. Miles F. Porter.—The author in two columns gives the result of (1) timely operation, and (2) of conservative treatment, or operation only when other treatment fails. The immediate mortality of prompt operation is less than two per cent.; the danger of hernia, nil; the danger of bowel obstruction slight; danger of recurrence, none; danger of secondary abscess, none. The immediate mortality of the conservative method is more than ten per cent. of operated cases and more than two per cent. of all cases. The danger of hernia is considerable. The danger of bowel obstruction is real. The danger of recurrence—thirty-three and a third per cent. of cases not operated upon and more than two per cent. of cases treated by incision and drainage. Secondary abscess is not infrequent. The author concludes that timely diagnosis and early operation is the truly conservative treatment of appendicular inflammation.

OBSTRUCTIVE DISEASES OF THE LOWER BOWEL.

By Dr. Henry O. Marcy.—In an interesting article the author considers: (1) The conditions extraneous to the bowel; (2) the obstruction caused by its contents; and (3) the pathological conditions belonging to the viscus itself. He regards the resection of the lower bowel for cancer by approaching it from above in many instances as a very great advance in modern technics. The lymphatic glands of the pelvis can be examined and removed if necessary as by no other route. The resection may be made much more accurately, and in many instances the function of the lower bowel preserved or restored. Cancer of the rectum is one of the most deplorable of all diseases. The last decade has, however, added greatly to the improved surgical methods for its relief and cure, but no field in surgery demands greater improvement in skill and technics or promises greater triumph in the relief of suffering.—*Boston Med. and Surg. Jour. and N. Y. Med. Jour.*

OBSTETRICS.

IN CHARGE OF

H. L. REDDY, M.D., L. R. C. P., London,

Professor of Obstetrics, University of Bishop's College; Physician Accoucheur Women's Hospital; Physician to the Western Hospital.

ECLAMPSIA.

Prof. Stroganoff reports 58 cases of eclampsia without a death. He considers it an acute infectious disease, whose duration is from 24 to 48 hours. He advocates morphia, .015 grms.; gr. $\frac{3}{16}$ given after the attacks hypodermically. Bromid. Sod. gr. 15 to 40 and chloral hydrat., gr. 22 1-2 to 37 1-2 per os or per rectum, chloroform to be avoided as being toxic. The use of oxygen, avoidance of all irritation, and rapid delivery by the natural route without any dangerous proceedings.

PUERPERAL SEPSIS — ITS PATHOLOGY AND TREATMENT.

Puerperal sepsis in nearly all cases is due to germs introduced from without. Auto-infection is very rare, though it is possible if there are latent gonococci in the cervical glands. It also occurs in women with a pus focus in the adnexa. Such a lesion usually causes sterility of early abortion. From the latest reliable source we can say that puerperal sepsis is caused by streptococci and staphylococci, and usually accompanied by other germs, especially saprophytic. The lesions are produced by the quick penetration of the uterine tissue by the pathogenic germs, where by way of the lymphatics they are carried to the venous sinuses and lymphatics of the pelvis, thus entering the general circulatory and lymphatic system. Septic infarcts result in septic pneumonia, septic endocarditis, acute nephritis and general suppurative peritonitis. Local results are ovarian abscess and pyosalpinx. From these results we classify puerperal sepsis into septic thrombotic and pelvic lymphangitis. The thrombotic is the most rapidly fatal. The severity depends upon the virulence of the germs, the extent of traumatism, the patient's general condition and the area of endometrium invaded. As puerperal sepsis is rapidly fatal, and when recovery takes place leaves lasting lesions to pelvic organs, early and accurate diagnosis is important. Microscopical and bacteriological examination of the uterine lochia obtained by Doederlein's tube is the only certain way of differentiating between septic and putrid infection.

Treatment.—The ordinary methods are condemned. Repeated uterine irrigations do harm. Curettage gives

20 per cent. mortality. Serum therapy gives 33 per cent. mortality. Since 1894 the author has used the following technique with the idea of checking local infection, combating general septicemia and preventing pelvic suppuration. The uterus is first thoroughly curetted, irrigated with many quarts of hot normal salt solution until all debris is removed. It is then packed with a 5 per cent. iodoform gauze. Douglas' cul-de-sac is then opened by a broad incision. The adhesions are then broken up and the cavity wiped dry. It is then packed with Mikulicz's pelvic dressing of iodoform gauze, which must completely fill the pelvis to the brim, except in front of the uterus. The iodoform is soon broken up and absorbed, appearing in the urine in two to five hours. Its absorption must be antagonistic to general sepsis. Locally the germs are destroyed very soon. Intravenous infusion of normal salt solution is used if the pulse is 120 or over, or if there are cardiac or kidney lesions. After operation colon enemata of normal salt solution are used every three hours, which eliminates toxins and iodine. The essence of the treatment is local and general iodism and elimination by the kidneys. Rapid abdominal hysterectomy is the thing to do in the case of thrombosis.—*Orth. Surg.*

SLIGHT FEVER IN THE PUERPERIUM.

Franz holds that slight rises of temperature during the puerperium are usually due to saprophytes, which cause such fever only when the lochial discharge is obstructed. They are probably the saprophytes normally present in the vagina. Internal examinations aid their action only by causing local injury of the vaginal wall, thus furnishing a point of entrance. Primiparae are much more subject to such febrile reactions than multiparae.—*Amer. Jour. Obstet.*

STERILIZATION OF THE HANDS AND PUERPERAL MORBIDITY.

Statistics presented by Sticher, and including 1,200 cases examined and delivered with sterilized rubber gloves and the same number without gloves, show a practically negligible difference in puerperal morbidity in favour of those handled with gloves. Having, in this group of cases, eliminated as far as possible infection by the examining hand, Sticher concludes that the genital canal is frequently the source of infection. For this reason he advocates a combination of asepsis of the hands and antiseptics of the genitals.—*Amer. Jour. Obstet.*

SYMPHYSIOTOMY AS CONTRASTED WITH SECTION.

Dr. Charles Jewett, of New York, read a paper lately on the above subject, in which he arrives at the following conclusions:

1. Symphysiotomy is still a useful operation within a very limited range of pelvic contraction.
2. It is suited to conditions in which only very little additional pelvic space is required for delivery.
3. It is a valuable recourse, therefore, in cases in which forceps unexpectedly proves inadequate.
4. Axis-traction forceps, with the aid of posture, should always be tried before resort to symphysiotomy.
5. Its results would be much improved by restricting it to pelves with a conjugate of not less than 7.5 cm., three inches.
6. Under equally favourable conditions its total mortality should be no greater than that of Caesarean section.
7. When the pelvic space permits, it should replace Caesarean section in the presence of exhaustion.
8. It may be elected primarily as an alternative of Caesarean section, when the operator can be assured that the degree of obstruction is well within its safe limit. Here the choice of operation is largely a matter of individual preference.
9. Within its proper field symphysiotomy is better than Caesarean section for an operator of little experience in abdominal surgery.

DIFFERENTIAL DIAGNOSIS OF INFLUENZA AND PUERPERAL INFECTION.

M. Stolz bases the differential diagnosis chiefly upon the frequency of relapse in influenza, and upon the relative slowness of the pulse except with serious pulmonary complications, it usually running between 100 and 120.—*Amer. Jour. of Obstet.*

DOUCHING DURING LABOUR AND THE PUERPERIUM.

R. Bretschneider gives the statistics of 2,280 women, 1,154 of whom received douches and 1,126 only disinfection of the external genitals. The figures given show a difference in favour of the latter class. Only one of each class died of sepsis, so the percentages are calculated upon the relation of one to the number included in each class. *Amer. Jour. of Obstet.*

Therapeutic Notes.

TO PREVENT SORE NIPPLES.

- R Tincturae benzoini compositi..... f. ʒ ss
Olei olivae..... f. ʒ ij
Lanolin..... f. ʒ vi

M. S.: To be applied after nursing, three or four times a day.—*Four. Amer. Med. Assoc.*

FISSURES OF THE NIPPLES.

- R Iodoformi..... gr. x
Unguenti zinci oxidi..... ʒ ss
Ichthyol..... f. ʒ j
Lanolin.....
Glycerini..... āā f. ʒ iss
Olei olivae..... f. ʒ iiss

M. S.: Apply night and morning.—B. C. Hirst,
Four. Amer. Med. Assoc.

DYSPEPSIA WITH SOUR ERUCTION.

- R Bismuth subnitrate..... ʒ iv
Mucil. acaciæ..... ʒ j
Sodii bicarb..... ʒ iv
Infusi calumbas..... q. s. ad. ʒ viij

M. Sig. :—Shake—tablespoonful after meals.

ERUCTION OF GAS.

- R Pesin (scales)..... gr. iij
Bismuth subnit..... gr. x
Strychnia sulph..... gr. ʒ
Thymol..... gr. ¼

M. ft. chart. No. i. Sig. :—After each meal.

GASTRALGIA.

- R Codeinæ sulph..... gr. iv
Antipyrini..... gr. xl
Tr. belladonnæ..... m xl
Elix. simplex..... ʒ iij
Aqua menthæ pip. q. s. ad ʒ iv

M. Sig. :—Teaspoonful every three or four hours until relieved.

FLATULENT DYSPEPSIA.

R. Aqua chloroformi,
 Aqua distil.,
 Aqua menthæ pip.....aa ʒ ij.

M. Sig. :—Teaspoonful before meals.

Jottings.

VARIOUS THERAPEUTIC HINTS.

Convulsions may be frequently cut short like magic by turning the patient on his left side. The nausea as an after-effect of chloroform or ether narcosis may be generally controlled in the same manner.

When chilly from exposure, breathe very deeply and rapidly and the increase in bodily warmth will be surprising.

Vomiting after the administration of chloroform may frequently be prevented by replacing the inhaler with a linen cloth steeped in vinegar, allowing it to remain over the face for some time.

People who have weak hearts should always have their principal meal in the middle of the day, and with as little water as possible.

Many a woman's ruin is due to the old idea that a woman can safely leave her bed on the tenth day after confinement.

Crude petroleum, poured upon a burned surface and covered loosely with cotton, will subdue the pain almost at once.

Black pins in surgical dressings are preferable because they will not rust, and can be more readily seen when they are to be removed.

Strong spirit of ammonia applied to the wounds of snake bites or rabid animals is better than any caustic. It neutralizes the virus.

Carbolic acid poisoning can be quickly cured by giving cider vinegar diluted with equal parts of water in half tumblerful doses every five or ten minutes for a few times.

In post-partum hemorrhage try tying a piece of strong webbing tightly above the knee of the patient.

To keep the hand soft after using plaster of Paris, carbolic acid, etc., an application on going to bed of ointment composed of melted beeswax, tallow and sweet oil to the hands will soften them in one night.

Cocaine poisoning is antidoted well by strong coffee.

A daily sponge bath is necessary for the pregnant woman, in order that the skin does not become inactive and throw its work upon other organs already severely taxed, especially the kidneys.

Potassium permanganate is an efficient antidote if taken while morphine is still in the stomach. Grain for grain it will completely decompose morphine.

A typhoid fever patient will do well upon a diet of rice water.

Ice, applied to the external genitals—the scrotum in men, the labia in women—is said to be the best and simplest method for controlling blood spitting and nose-bleed.

A baby may be filled up to the neck with milk and still be hungry.

In prescribing infant foods it is worth remembering that rice is an astringent and farina a laxative.

A towel dipped in boiling water, wrung out rapidly, folded to proper size, and applied to the abdomen, with a dry flannel over the hot towel, acts like magic in infantile colic. M. E. Douglass.—*Medical Record*.

Kühn says that deep injections of antipyrine into the region of the sciatic nerve promptly relieves sciatica. He uses a long needle and makes the injections at a point nearly midway between the tuberosity of the ischium and the great trochanter, and a little below a line joining these points.

A thin paste made by mixing iodoform in balsam of Peru is an excellent application to chronic indolent ulcers. Over this place a dressing of bichloride of mercury gauze.

A lotion made of one drachm of permanganate of potassium to one pint of water is very effective in counteracting the odour of sweating feet.

In incontinence of urine in children, antipyrine has proved to be useful in large doses. Take two drachms of antipyrine and dissolve it in one ounce of water and add one ounce of alcohol. Take one teaspoonful at bedtime.

Balsam of copaiba is an excellent remedy for chilblains; paint it on once a day or more.

The following is Vidal's formula for seborrhoea sicca of the scalp. Precipitated sulphur, 15 parts; castor oil, 50 parts; cocoa butter, 12 parts; balsam of Peru, 2 parts. Thoroughly mix the sulphur and castor oil, add the cocoa butter with the aid of a gentle heat, and finally the balsam. Rub into the scalp.

In barber's itch the part should be closely shaved every day and the following applied: Tannic acid, fifteen grains; milk of sulphur, one and one half drachms; oxide of zinc and starch, of each four drachms; vaseline one ounce. Apply twice daily.

According to the *Peoria Medical Monthly*, stains produced by the explosion of gunpowder may be removed by first painting the skin with a solution of biniodide of ammonium in an equal part of distilled water, then with dilute hydrochloric acid.

It is said that ringworm of the scalp will readily yield to the following: Menthol, one drachm; chloroform, four drachms; olive oil, twelve drachms.

Fissure of the nipple has been very successfully treated, by many physicians, with orthoform. A few drops of a saturated solution of orthoform in 80 per cent. alcohol is applied directly to the crack, and a dry compress is then placed above.

Wilmott Evans, after advocating the value of warm baths in pruritus, says that of all lotions those containing carbolic acid are the most efficient. He advises that 1 part of carbolic acid be dissolved in 60 parts of water, and says that if an alkali is added the sedative action is increased. He uses the following formula:

R̄	Acidi carbolicæ liquefacti,.....	4.00
	Liquoris potassæ,.....	2.00
	Aquæ ad,.....	300.00
	M. S. lotion; or	
R̄	Acidi carbolicæ,.....	4.00
	Sodii boratis,.....	4.00
	Aquæ,.....	500.00
	M. S. Lotion.	

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Editorial.

BISHOP'S MEDICAL AND DENTAL DINNER.

The annual dinner of the graduates and undergraduates of the Medical and Dental departments of Bishop's College, Montreal, took place on the 7th of November, at the Place Viger Hotel. The room was handsomely decorated, and the attendance was large, exactly one hundred sitting down to dinner. The chair was occupied by Mr. C. M. Cass, a fourth year student, who had on his right John Hamilton, Esq., Chancellor of the University, and Dr. F. W. Campbell, Dean of the Medical Faculty, and on his left, L. H. Davidson, Esq. and Dr. Kent of the Dental Department.

The menu was the Place Viger's very best, and therefore left nothing to be desired. Speeches were made by the Chancellor, in response to the toast of Alma Mater, and by Dr. England and Dr. Kent in reply to the toast of "Deans and Professors." Dr. Deeks proposed the toast of "Guests," which was replied to by L. H. Davidson, Esq. With speech, song and story the evening passed most pleasantly. One of the best things of the evening was a recitation, *a la* Irving, by Mr. Cunningham, a student. The wee small hours came around before the meeting closed; when everyone admitted it was the most successful dinner Bishop's ever had.

CHLOROFORM VS. ETHER.

We believe that, generally among the Profession, there is a strong consensus of opinion that ether is much the safer anaesthetic, as compared to chloroform. So strong is this opinion that if the latter was administered, and death ensue, satisfactory reasons would have to be given for its being used instead of ether. No doubt such reasons can, at times, be given, but when we consider the relative mortality from the two drugs there ought to be no hesitation in coming to the conclusion that the routine anaesthetic for general surgical use should be ether. While we believe that as a general principle this is unassailable, yet we must admit to the surgeon or specialist the privilege of selecting the anaesthetic, which, under the circumstances, he considers most suitable in a given case. But, before deciding to use chloroform, he should be prepared in the event of untoward symptoms of death, to justify his choice. In the choice of an anaesthetic, it ought always to be kept in mind that chloroform is at least seven times a more powerful nerve poison than ether, and, as a result, the margin of safety is correspondingly reduced. It is a striking fact how other figures in relation to the two drugs bear out this pretension. Estimating roughly, it is said we may use as many ounces of ether for a given length of anaesthesia as we do drams of chloroform. The percentage mortality of the two drugs is very instructive. Combining the statistics collected by Drs. Julliard and Ormsby, we find that ether, roughly speaking, is five times as safe as chloroform.

Anaesthetic.	Total number of Administrations.	Total Number of Deaths.	Death Rate.
Chloroform.	676,767	214	1 in 3,162
Ether.	407,553	25	1 in 16,302

We have made the above remarks because we have recently seen a paper by Dr. Frazier, of Louisville, Kentucky, in which he advises the use of chloroform as a general anaesthetic, and states that his views are endorsed by many of his conferees in that town.

Personals.

Dr. William Bayard, of St. John, N. B., completed his eighty-seventh birthday on the 21st of August last. He is hale, hearty and as clear intellectually to-day as he was in his younger days; and then he was one of the brightest intellects in the Canadian profession. For years he was a regular attendant at the meetings of the Canadian Medical Association. He is still following his professional work.

Dr. Sharp (M. D., McGill, 1885) has been appointed Lecturer on Diseases of Children, in the Medical Faculty of Bishop's College.

Dr. F. E. Thompson (M. D., McGill, 1890) has been appointed an instructor in obstetrics in the Medical Faculty of Bishop's College.

Dr. J. A. Gillespie (M. D., Bishop's, 1901), who has been House Surgeon of the Western Hospital since May last, has resigned, to enter upon practice at Cumberland, Vancouver, British Columbia.

Dr. E. A. Tomkins (M. D., Bishop's, 1901) has commenced practice in Richmond, Q., as successor to Dr. McMorine, who died suddenly on the 4th of September last.

Book Reviews.

Diseases of Ear, Nose and Throat. By Charles H. Burnett, A. M., M. D., Philadelphia; E. Fletcher Ingals, A. M., M. D., Chicago; James E. Newcomb, A. B., M. D., New York city; J. B. Lippincott & Co., Philadelphia and London, 1901. Canadian Agent: Charles Roberts, 1524 Ontario Street, Montreal. Numerous illustrations.

The pleasure of reviewing so excellent a volume as the above is not often afforded us. The work is divided into three parts, each written by a practical teacher especially familiar with the subject which he treats. The Anatomy and Physiology of the ear, nose and throat stands as a prominent feature in this work, which few will deny the necessity for, before proceeding to treatment.

The review in this department is very complete and is in accordance with the latest discoveries in these special fields of investigation. As regards treatment, the methods of medication and surgery are claimed to be the latest, and accepted generally as best by many leading laryngologists. The illustrations and coloured plates are very good, the type clear and binding substantial. Altogether, the volume is high class, and we highly recommend it to all as an excellent work of reference.

G. T. R.

Manual of the Diseases of the Eye for Students and General Practitioners, with 275 Original Illustrations, including 36 coloured figures. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, Eye Department, College of Physicians and Surgeons, Medical Department, Columbia University, New York. Second Edition, Revised, New York, William Wood & Company, 1901.

The fact that a second edition of the book has been called for in less than a year from the date of its first appearance in print is ample proof that students of ophthalmology have found Dr. May's Manual of especial value among works of its kind. As the new edition follows so closely on the old the text has not been altered to any great extent, but numerous coloured plates have been added, which increase the book's usefulness not a little. On account of its practical, terse treatment of the subject, its clear print, copious illustrations, small volume, and what appeals strongly to medical students, its low price, we can hardly recommend the book too highly.

G. W. M.

Atlas and Principles of Bacteriology and Text-Book of Special Bacteriologic diagnosis. By Prof. Dr. K. B. Lehmann and R. O. Neumann, Dr. Phil. and Med. Wurzburg, translated from the second edition and edited by George H. Weaver, M.D., Rush Medical College, Chicago. Published by W. B. Saunders & Co., 1901. J. A. Carveth & Co., Toronto, Canadian agents.

The first volume or atlas contains 69 plates with 632 figures, and a page of letter-press descriptive of each plate. The plates depict 96 micro-organisms under various conditions of growth, and in the different media as well as the microscopic appearance of them. This gives merely the scope of the book, but conveys no idea of the truth and beauty with which the work is executed. The first plate, for example, contains eleven figures, giving the appearance of streptococcus pyogenes in agar and gelatine tube and plate growth at different periods and various temperatures. Cover slips are also depicted. The same is done for nearly a hundred

organisms, so that the plates cover practically the whole field. One is at a loss which to admire most, the skilful drawing and colouring or the fidelity with which they are engraved and transferred on stone. The book is as useful as it is beautiful. The illustrations illustrate and the descriptions describe. The execution represents the very best that has been done in medical book-making. The work is in two volumes. The price of the set is \$5.00.

A. M.

The Principles and Practice of Medicine designed for the use of Practitioners and Students of Medicine.

By William Osler, M. D., Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University, etc., etc., etc. New York: D. Appleton & Co., 1901.

The 1901 edition of Osler's Practice of Medicine is to hand and does credit to its distinguished author, and also its publishers, D. Appleton & Co.

A text-book, however, which is so eminently a student's manual, and consequently much in use, ought to have a better binding; otherwise the publishers have done their work well.

In regard to its contents. At a time when medical authors are so numerous and voluminous, a work requires no small merit to commend it to the medical profession. The circulation of this text-book is now so universal and so large that its merits cannot be gainsaid.

Modern Medicine has progressed very rapidly, and a number of diseases discussed in the former edition needed re-writing. This he has done, bringing the knowledge concerning them well up to date.

I know of no other text-book which comprises so much systematic medical information in as scientific, succinct and condensed a form as Osler. The pathological anatomy is very detailed and exhaustive, and statistics though often misleading abound.

Though we are often disappointed that the discussions on the management and therapeutical treatment of certain affections are so meagre and curtailed, yet nowadays there seems to be a tendency to think that the all-important object of the medical practitioner is to diagnose his case, and then, with suitable hygienic surroundings leave the rest to the *vis medicatrix nature*.

Some of us feel, however, that the comfort and well-being of the patient are the prime considerations, and that the discussions in the management and drug treatment should be more suggestive and detailed.

In this respect Osler does not do himself justice, though better than many modern writers.

To nervous diseases he only devotes 247 in a text-book of 1,150 pages. This is insufficient. To discuss the diseases of the

nervous system as exhaustively as those of the other systems would require twice the space allotted to them. The excuse may be that because of their chronicity and in some instances comparative verity, too much space should not be given.

One of the most important things for the student to be able to do is to diagnose a functional from an organic disease, important both as to prognosis and treatment. The functional stigmata are not as exhaustively treated as they deserve, or as we feel the author is capable of doing in this connection.

Taken altogether, the text-book has no superior, and few equals as to its readability, condensed amount of information and its systematic, scientific methods of dealing with the etiology, pathology and symptomatology of morbid conditions.

W. E. D.

PUBLISHERS DEPARTMENT.

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This Company, of New York city, opened a branch in Montreal about a year ago, since which time the various preparations which are prepared in their laboratory has been brought to the notice of the profession. These are numerous and are only introduced through advertising in Medical journals. We have heard their Lacto-Lithiated Strontium highly spoken of in Bright's Disease. Their Nitro-Glycerine solution, a non-alcoholic combination of Bi-Chl. of Mercury, Hydrocyanic Acid Dilute, Crude Pyroligneous Acid, Tuligo Ligni, Gyn-cardia Odorata and Glycerine is said to be of especial value in that obstinate disease, eczema. They make a preparation of Bone Marrow, which is pleasant to take and which we have used in wasting disease with much benefit. Catalogues of their specialties will be sent on application to their Montreal Depot, which is at 28 St. Antoine street.

LITERARY NOTES.

The National Review's important article on the Foreign Policy of England, which has set both the English and the Continental press to talking of the possibility of an understanding between England and Russia, will be reprinted without abridgment in *The Living Age* for December 14.

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