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CANADA MEDICAL RECORD

FEBRUARY, 1901

Original Communications.

PROGRESS OF GYNECOLOGY.

By A. LAPTHORN SMITH, M.D., M.R.C.S., Eng.

Fellow of the American and British Gynecological Societies, Surgeon-in-Chief of the Samaritan Hospital for Women; Gynecologist to the Montreal Dispensary; Professor of Clinical Gynecology in Bishop's University; Surgeon to the Western Hospital; Consulting Gynecologist to the Women's Hospital, Montreal.

In the report of my cases which have appeared from time to time, I have several times referred to the frequency of appendicitis as a complication of disease of the right tube. I have just received a *brochure* on this subject from Dr. McLaren, of St. Paul, in which he states that, out of fifty-eight cases of diseased tubes and ovaries, the appendix vermiformis was affected enough to require removal in twenty of them. He also reports several cases of right-sided dysmenorrhoea which were not benefited by any treatment, even including dilatation and curetting, which were immediately permanently cured by removal of the appendix. This experience entirely coincides with my own. I believe that constipation, which is so frequent in young girls, causes infection of the appendix by the colon bacillus, and the infected appendix, becoming heavy, drops into the pelvis and infects the tube and ovary in the right side.

I was glad to see by his article that he holds the same opinion as myself on the best method of removing the appendix, namely to cut it off as closely as possible to the cæcum and then to treat the hole in the latter as a bullet wound by applying a purse string suture of cat-gut first to the muscular layer and a second one to the peritoneum, thus avoiding abscesses from sloughing of the stump, which frequently oc-

curs when the appendix is tied off in the usual way. I have always been especially opposed to Edebohl's method of inverting the appendix without removing it, for it is bound to slough because it is cut off from its blood supply from the meso-appendix, and during this process it is apt to infect the rest of the cæcum.

The surgical importance of jaundice.—In the course of an able and exhaustive article by Dr. McLaren on this subject, he states that, out of thirteen operations on the gall bladder and bile ducts in 1899, no disease was found in two; in one adhesions existed between the gall bladder and pylorus. The remaining ten all showed gall stones in greater or less numbers, and all of these with one exception showed evidence of cholecystitis, yet in not one of them had jaundice ever been present at any time during the course of the disease. When we come to well-marked and persistent jaundice, he says we find the great majority of these cases to be suffering from carcinoma of the liver. This is a fairly common disease, as appears from the *post mortem* records of Guy's Hospital, namely, 126 cases in 8 years out of 4,200 autopsies or 3 per cent. The surgery of cancer of the liver is very unsatisfactory, the end being hastened even by an exploratory incision. His conclusions are interesting: (1) That slight attacks of jaundice are of comparatively little surgical importance and that the majority of surgical diseases of the biliary passages have no jaundice at all. (2) That persistent jaundice, especially if progressing, is usually a contra-indication. (3) While on the other hand intermittent deep jaundice, especially if associated with chills and a rise in temperature, denotes a stone in the common duct which urgently demands removal.

Vaginal morcellation of the myomatous uterus.—Thienhaus, of Milwaukee, in an elaborate article in the American Journal of Obstetrics for Oct., 1900, strongly advocates this method of dealing with fibroid tumours of the uterus, a method which I have always opposed even after having seen it performed by two of its greatest exponents, Landau, of Berlin, and Segond, of Paris, the latter of whom has since abandoned it in order to adopt Kelly's method. Thienhaus' reasons for preferring the vaginal method are: 1st, He claims that there is more

shock by the abdominal route. This I deny; if the patient is kept warm and dry, if the operation is quickly performed, if only a small amount of anæsthetic is used, if no blood is lost (not more than an ounce or two), if she has been properly prepared and is operated on in the Trendelenburg position, so that above all the bowels are not seen and still less handled, then I claim that there is even less shock by the abdominal operation than by vaginal morcellation. 2nd He claims that there is less danger of infection of the peritoneum and better drainage, while fæcal fistula due to injury of the bowel which oftener happens after vaginal morcellation has a better chance of recovery. To this I reply that by the abdominal method there is nothing to drain, the peritoneum being left clean and dry and everywhere closed, and the bowels are not injured because we can see what we are doing and can take care not to hurt them. 3rd, That the bowels adhere to the incision. But this does not occur if the omentum is well drawn down behind the incision. 4th, He quotes Winter and Olshausen as saying that ventral hernia occurs after abdominal operations in 8 per cent., after three layer sutures, and in 20 to 30 p.c. after through and through sutures. To this I reply that by leaving the sutures in for 4 weeks I have had no hernia during the last four years in about two hundred abdominal sections. 5th, He claims that vaginal morcellation is safer for the ureters, but I hold that all the cases of injury to the ureters that I have heard of occurred in vaginal operations, and the only time that it has ever happened in my own work was in a case of vaginal hysterectomy, while in my fifty cases of abdominal hysterectomy it has never happened once. 6th, He claims that there is less loss of blood. This I deny; for in my last fourteen cases of abdominal hysterectomy for fibroids there was not in any of them as much as four ounces of blood lost, in some only half an ounce, because all arteries were tied before being cut. Moreover, Thienhaus lost one case in twelve (in this case he was unable to complete the operation by the vagina), while against this I have to report fourteen cases—all I did in the last two years—recovered. One of them was a particularly unfavorable case, being 50 years of age, waxy in appearance and having both an organic and a

hæmic murmur, and yet she made a perfect recovery. Still another objection to vaginal hysterectomy is the removal of the cervix which it implies, for nearly every married woman in whom the cervix is removed complains, and her husband complains of the shortening of the vagina.

Compression of the ureters by fibroid tumors.—Knox, of Baltimore, one of Howard Kelly's assistants, has collected twenty-five cases in which more or less serious disease of the kidneys was caused by compression of the ureters followed in some cases by death from uræmic coma. This article is very timely, because the erroneous teaching is widespread that fibroid tumors, as a rule, cause no injury and should not be interfered with until they become very large. I admit that at one time I accepted this view, but now I am convinced that with so low a death rate from the operation, if done early, this should be done in every case. The deaths are due to complications such as described by Knox and by delayed operations.

Selected Articles.

ABDOMINAL RELAXATION, A PROBABLE FACTOR IN THE PATHOGENESIS OF GALL-STONES.

By JESSE S. MYER, A.B., M.D., St. Louis, Mo.

Different theories have been advanced at different times concerning the origin of biliary calculi, but, based upon false hypotheses, each in turn has added a link to that endless chain of retracted statements and disproven theories that marks the path of every progressive science.

Though much has been written concerning the etiology, the symptomatology and treatment of gall-stones, little was definitely known concerning the pathogenesis of these calculi prior to 1890. The last decade has, however, recorded material and substantial progress along this line. The able and convincing publications of Naunyn in 1891 and 1892, in which he maintained that cholelithiasis is invariably the result of infection of the gall-bladder and ducts, with the consequent production of cholesterin, and stagnation of the bile,

gave an impetus to research which has been productive of results that will stand the test of time. Though some of Naunyn's hypotheses have since been proven wrong, he was correct in the fundamental principles, which prior to this time had been in a great measure overlooked. Until now the same principles were thought applicable to these, as to concretions in general.

Von Recklinghausen, for instance, in referring to concretions in general, draws the following conclusions: (1) concretions develop from substances dissolved with difficulty by the tissue juices, secretions and excretions—the gall-stones from cholesterin, and bilirubin salts, etc., etc.; (2) these substances are contained in their vehicles in abnormally large quantities; (3) the presence of a foreign body plays an important rôle, presenting a nucleus around which the precipitated crystals may form layers.

Gall-stones are composed largely of cholesterin and bilirubin-calcium salts, both of which are substances very difficult of solution. Based upon this fact, it was formerly thought that gall-stones resulted from an increase of cholesterin in the blood, due to disturbance in metabolism or the nature of the food ingested, and its consequent excretion by the liver and precipitation in the bile. This explanation, for a time accepted, was finally disproven by a demonstration of the fact that cholesterin was not increased in the blood of those individuals; in fact, that the injection of cholesterin into the blood and its introduction into the intestines did not materially increase the quantity in the bile.

These investigations of Jankau and Thomas, together with his own observations, led Naunyn to the conclusion that cholesterin in the bile is in no way dependent upon the general metabolism and the food ingested, but that the whole has its origin in degenerative processes of the desquamated cells from the gall-bladder and ducts. Inasmuch as cholesterin is found in pus, sputum, serous exudates and transudates—in fact, wherever there is a desquamation and degeneration of the lining cells of the mucous and serous surfaces—Naunyn assumes that the same occurs in the gall-bladder and ducts. Since the quantity of cholesterin in the blood is very small compared with the quantity found in the bile and stones of these cases, he concludes that the entire amount has its origin in these degenerative processes. This theory, however, is scarcely tenable now. The great discrepancy between the quantity of cholesterin in the blood and that in the bile is to be explained by the length of time required for the development of biliary calculi and the concentration there of certain substances through the stagnation

of the bile. Though a very small portion of the stone-forming elements may originate in the manner described by Naunyn, it is now pretty generally maintained by leading authorities on physiologic chemistry that cholesterin, found in various tissues and in the blood, is the result of metabolism, and must be considered an excretion. They consider the bile as a whole an excretory product, having secondary digestive functions to perform; in it are excreted those substances not soluble in water, and which cannot therefore be excreted by the kidneys, skin or lungs. Chief among these substances are cholesterin and bilirubin salts. Inasmuch as bilirubin is found in combination with calcium salts in the bile and biliary calculi, it was at one time thought probable that an increase of calcium salts in the blood, their excretion and precipitation with bilirubin in the bile, played an important role in the development of cholelithiasis. But neither the intravenous injection of calcium salts nor their ingestion with the food increased them as constituents of the bile. In fact, it was not even possible to precipitate the bilirubin salts and cholesterin through concentration of the bile by evaporization or direct addition of calcium to the bile itself. Their solubility is not affected by or dependent upon their concentration.

These substances, otherwise insoluble in water, are held in solution by the cholates and fats. Perhaps a breaking up or dissociation of the cholates would result in the precipitation of these substances that they aid in holding in solution. This theory, too, was doomed to disappointment. Minkowski demonstrated that in the entire absence of the cholates the fats and soaps present are still capable of maintaining the solution.

It has been frequently demonstrated that the presence of foreign bodies in the gall-bladder does not suffice to produce cholelithiasis. Gall-stones themselves have been introduced into the normal gall-bladders of animals only to disappear entirely or in part within a short time afterwards. Other foreign bodies have been introduced and left to remain in the bladder for three to eight months with a like result. Though there are cases recorded in which gall-stones have been found with silk threads, etc., as nuclei, there were in all probability other factors at work in these cases. The truth remains, however, that perfectly sterile foreign bodies introduced into the normal gall-bladder will not result in the formation of biliary calculi.

The foregoing, while proving nothing in a positive way, does show that the cause of the development of gall-stones is dependent upon principles not governing concretions in

general. Their pathogenesis cannot be explained upon a purely chemical basis. An increase of the constituents of the bile, their greatest concentrations, the absence of those substances holding them in solution, the addition of calcium, the presence of foreign bodies, have all failed to explain satisfactorily the precipitation of the stone-forming elements. The cause, then, must be sought elsewhere. The bile of persons afflicted with gall-stones was found upon several occasions to contain pathogenic bacteria. Among those that had been found prior to Naunyn's publication, the bacterium coli commune were the most frequent. This led to their consideration as a probable factor in the pathogenesis of these calculi, and started research along the right path. Inasmuch as the bile has been deprived of much of the antiseptic power formerly attributed to it, it is now well known that infections of the mucous membrane of the gall-bladder may occur in other ways than through the lymph channels. It may result from the presence of pathogenic bacteria in the bile itself. How these intruders gain entrance to the bile in every case is still a disputed point. It is maintained by some that they gain entrance through the ductus communis choledochus from the duodenum, while others claim that this rarely, if ever, occurs, and that these infections take place through the portal system from the intestines. No doubt both are, in a measure, correct. While the infection is most often a hematogenic one, an ascending infection from the duodenum is in all probability possible. Futterer demonstrated through a series of very interesting experiments that bacteria which gain entrance to the portal circulation from the intestinal tract are soon excreted by the liver and kidneys, and are found in the bile and urine. Cultures of the typhoid bacilli, the bacterium coli commune, and the bacillus prodigiosus, and others, were cultivated from the bile of animals into whose portal veins cultures had been injected. He found, too, that micro-organisms may find their way through the intestinal walls into the circulation, even in the absence of great pathologic lesions. That these may retain their vitality in the bile and produce an inflammation of the mucous membrane of the gall-bladder, where stagnation exists, has been frequently seen clinically and experimentally. In fact, no one now doubts the possibility of the blood route of such an infection.

I am led to believe that an ascending infection from the duodenum is also possible, because of an interesting observation that I had occasion to make recently in the microscopic examination of a set of gall-stones. These stones, averaging about the size of a grain of wheat, were cleansed thoroughly externally, crushed and dissolved in ether. The

solution was then centrifugalized, and the ether containing the cholesterol was poured off. This procedure was repeated until only a small powdered precipitate was left behind. The microscopic examination of this precipitate revealed a few yeast cells in branches, several starch granules, epithelial cells, bacteria in clumps and plant rests. These bodies, it seems to me, can be interpreted only as duodenal contents. They may in this case have been a factor in the formation of the stones, but the chief conclusion that I wish to draw from this observation is, that if it is possible for duodenal contents to regurgitate into the gall-bladder, it must be possible for bacteria from the duodenum to do likewise, if there exists stagnation of the bile. Although Cushing found the duodenum of rabbits practically sterile, this would not exclude the possibility of an ascending infection. Assuming even that the same were true of the normal duodenum of the human, it would certainly not be the case where there existed affections of the stomach and duodenum such as dilatation of the stomach, duodenitis, etc.

Leaving out the consideration for the time, being a further consideration of the manner in which the infection occurs, but granting that it is an all-important factor, I desire to consider shortly the investigations that led up to the absolute proof of the relationship existing between cholecystitis and cholelithiasis. Cases of cholecystitis following and complicating typhoid fever have been very frequently reported and bacteriologic proof presented of the typhoid origin of these infections. Flexner found living bacilli in the bile of 50 per cent. of the fatal cases of typhoid fever. Blachsteins found them as late as 128 days after injecting them into the veins of animals. Hunner isolated and cultivated the bacilli from the bile of a patient 18 years after an attack of typhoid fever. Miller found the same 7 years after typhoid infection. Early in 1898 Cushing had collected four cases from the literature of gall-stones following typhoid fever. In these cases there was a co-existing cholecystitis, due to a typhoid infection, as was proven by the bacteriologic examination. While the clinical observations all point in one direction, viz., to the infectious origin of biliary lithiasis, the experimental investigations are even more convincing. With the above data at hand, various attempts were made to produce gall-stones in animals artificially.

These efforts, at first unfruitful, after a time resulted in the formation of imperfect concretions. In 1867, however, Gilbert produced well-formed stones in the gall-bladder of a dog, and soon afterwards Richardson, Mignet, Cushing and

others were likewise successful. It was found in the course of these experiments that something more than the mere introduction of virulent germs into the gall-bladder was necessary for the production of stratified calculi. It was necessary to prevent the too-rapid expulsion of the soft precipitations, and this through the stagnation of the bile. The importance of stagnation of the bile as a factor in the formation of biliary calculi has long been recognized, but not in its true connection. Rokitansky attributed their development to a "morbid constitution of the bile, which may be abnormal when secreted, or subsequently become so from stagnation and retention."

Netter demonstrated experimentally that stagnation of the bile alone frequently suffices to cause an infection of the mucous membrane of the gall-bladder. If, then, infection plus stagnation results in the formation of gall-stones, and stagnation alone may result in infection, may we not justly conclude that stagnation of the bile in itself may result in the formation of gall-stones. Stagnation, wherever it occurs, promotes the growth and development of microorganisms. Dilatation of the stomach, in which stagnation of the gastric contents is the invariable result, is characterized by a rich flora of bacteria, urinary stagnation, results in cystitis, etc. The normal peristalsis and muscular activity of an organ are preventives *par excellence* of the further growth and development of the germs contained therein. Germs are ever present, but without a proper soil they do not develop. Virulent bacteria that have gained entrance to the blood through such portals as the tonsils, Peyer's patches, etc., are excreted with the bile, but unless retained in the gall-bladder long enough to multiply and gain, as it were, a foot-hold, no infection occurs. Stagnation, then, is to be looked upon as a predisposing cause and infection as the exciting cause of gall-stones.

I have found little in the literature in explanation of the probable cause of stagnation of the bile in those cases where there exist no pathologic lesions, such as tumors pressing directly or indirectly upon the ducts, scar formation, congenital malformation of the gall-bladder, etc., etc. It is to this point that I have been aiming, and, though a very circuitous route has been taken, I trust the ground covered has been worth the while.

The etiology of cholelithiasis bears a very close relationship to its pathogenesis. A large percentage of gall-stones occurs in women; this is variously stated by different authorities. However, about 85 per cent. occur in the female and 90 per cent. of these in those that have born children.

Those occurring in men manifest themselves after the age of 50, and usually in those who have at one time been fleshy and have lost much of their subcutaneous fat. There is then a predisposing cause in women who have born children and in old men. That the female gall-bladder is more susceptible to infection than the male is not at all probable; that there is a greater provocation for the stagnation of bile there can be no doubt. This fact has led to the popular belief that gall-stones prevail among women because of tight lacing. While this may be a contributing factor, I think entirely too much stress has been laid upon this point heretofore. Tight lacing cannot explain why gall-stones are more frequent among old women than among those who are guilty of the tightest lacing. Statistics collected by Von Recklinghausen, of Strassburg, present, too, splendid argument against this claim. In Berlin where the hospitals are filled with city-bred women and the wearing of corsets prevails, $1\frac{1}{2}$ per cent. to 2 per cent. of the population, as shown by post mortems, are afflicted with gall-stones; in the Strassburg hospital where peasants are the chief source of clinical material, 15 per cent. are afflicted. Peasants are not accustomed to tight lacing indeed, many have never seen corsets, so other sources must be sought for an explanation of the cause of biliary stagnation. The poorer classes, as is well known, are more prolific than the city bred, whose education along certain lines is not neglected, and they are, as a rule, poorly cared for after labor. Either they have a midwife or a neighbor to attend them and are up assisting the husband to earn the daily bread within a few days after labor. The necessity for abdominal supports after labor, avoidance of physical exertion and other like precautions receive no attention at their hands. I am inclined, therefore, for this and other reasons to attribute the stagnation of the bile in many cases to the relaxation of the anterior abdominal walls and a consequent ptosis of the abdominal viscera. That any increase in the size of the so-called abdominal cavity necessitates a displacement of some or all of the viscera, or a dilatation of the hollow organs through the pressure of their contents, seems to me self-evident. The significance of hernias, prolapse of the pelvic viscera, the pendulous and relaxed abdomen in the production of visceral ptosis, and especially nephroptosis, has been very ably presented by Wolkow and Deitzen of St. Petersburg in a work of some three hundred pages. Landau, too, in 1881 and 1885 showed the effect of the pendulous abdomen in the production of ptosis of the kidney and liver, and the principles proclaimed by him have since been applied to splanchnoptosis in general. Indeed, it is now generally conceded that relaxation of the abdominal walls almost

invariably results in mechanical disturbances of the abdominal viscera such as gastroptosis, gastric dilatation, enteroptosis, movable and floating kidney, etc., with all their consequences. A certain external pressure is necessary to maintain the various abdominal viscera in their normal positions, the ligaments alone are not capable of maintaining the entire weight of the organs. Consequently, any relaxation of the pressure exerted by the abdominal walls imposes more work upon and would in time result in a relaxation and stretching of the ligaments, with a consequent ptosis of the organs held in position by them. The relationship of the abdominal organs is such that any displacement of the one disturbs directly or indirectly the normal function of the other. This is especially true of the hollow viscera, and among them the gall-bladder.

The normal expulsion of the bile is attributable largely to the periodical compression of the liver and gall-bladder, with each inspiration against the underlying viscera and to the peristaltic action of the muscles of the bile ducts and gall-bladder. Visceral ptosis then, consequent upon abdominal relaxation, and other causes as well, may cause stagnation of the bile through: (1) Displacing the gall-bladder downward, thus causing a partial obstruction to the outflow of the bile (it has been demonstrated that the very slightest resistance in the ducts causes a stagnation of the bile); (2) through interfering with the counter-pressure normally exerted upon the gall-bladder by the underlying viscera (during respiration); (3) through a dilatation of the gall-bladder itself, atonicity of its muscles and a consequent interference with the normal peristalsis. The pressure within the gall-bladder is positive, being equivalent to the pressure of a column of water 210 mm. high. So long as the pressure from without exceeds or equalizes this, no dilatation can result, but when this equilibrium is disturbed, dilatation and atonicity of the hollow viscus follow. This, in all probability, accounts for the great frequency of constipation in women who have borne children.

In closing, it might be well to mention that, while I have spoken only of visceral ptosis resulting from a relaxation of the abdominal walls, I grant that visceral ptosis, due to any cause whatsoever, would result similarly. Those cases due to inherited tendencies, so ably described by Glénard, those following disturbances in nutrition, senility, cachexias, etc., if sufficiently marked, would bear the same relationship to gall-stone formation.

In a few words the foregoing may be summed up as follows:

- I. Visceral ptosis consequent upon abdominal relaxa-

tion and other causes results in stagnation of the bile through interfering with the normal expulsion.

2. The inactivity of the gall-bladder and stagnation of the bile predisposes the mucous membrane to infection.

3. This infection may be either hematogenic, through the portal system, etc., or an ascending infection from the duodenum.

4. This results in a catarrhal inflammation of the mucous membrane, an albuminous exudate, and the exfoliation of epithelial cells. (According to Naunyn, the addition of albumin to the bile produces a copious precipitation of the stone-forming elements.)

5. This precipitate, with clumped bacteria, and degenerated cell masses as nuclei, forms biliary calculi.—*St. Louis Med. Review.*

THE TREATMENT OF FEVER IN INFANTS.

By H. M. McCLANAHAN, M.D., Omaha, Neb.

In order that I may make myself more clearly understood, a few general remarks on the subject of fever may not be out of place. While we are yet in doubt as to the exact mode of production of animal heat, we do know that the bodily temperature, in health, is constantly maintained under varying conditions of atmospheric environment, and that the range of heat either above or below the normal, compatible with life, is limited to a few degrees. Fever is a morbid condition of the system, characterized by a more or less enduring elevation of the bodily temperature. It is a symptom associated with nearly all diseased conditions. Fever is a symptom more frequently present in infants than in either children or adults, and its effects are more immediately serious. Why this is so we do not positively know, but it may probably be inferred that it is due to the preponderance of brain tissue over body and the immaturity of the gray matter, permitting the nerve centers to be more readily disturbed. Because of these conditions, the regularity of the production of heat, which physiologists teach, reside in the nervous system, is less than in the adult. Again, the greater susceptibility of the infant to the invasion of microbes, association with their feeble resisting power, combine to make them more prone to the development of fever.

Fever is a symptom illustrating the intimate relationship between physiology and pathology. Normal body heat is essential to the performance of the vital functions. Febrile

heat is the exaggeration of a normal function rather than a separate and distinct process.

The causes of fever cannot always be determined. Indeed, many cases come under our care, in which this is the only symptom present. Frequently we are unable to discover any cause for the fever. Modern medical thought is in the direction that fever, in the great majority of cases, is due to the invasion of the system by pathogenic bacteria, and that the increased heat is induced by the presence of the bacteria, or their products, in the tissue or fluids of the body. That this has been demonstrated to be true in the greater number of cases does not admit of doubt, but that all fevers are caused in this manner is probably not correct.

In some cases it seems highly probable that fever is due to imperfect elimination; that is, effete material, the result of tissue metabolism circulating in the blood, acts as an irritant to the nerve centers. This theory seems very probable in the case of infants, and will satisfactorily explain many acute cases of fever, because of the immatured cell life and the rapid growth of the tissues, very trivial causes being sufficient to disturb the relation between nutrition and elimination.

It is a curious fact, well established by clinical observation, that mental emotions, as fear, anger, grief and joy, rarely induce fever, but that mental disturbances in those suffering from fever frequently produce an acute exacerbation. Even in infants I am satisfied that the same thing applies. Who has not seen a child suffering from fever made worse by being annoyed by the presence in the sick room of officious friends.

Fever does not always imply the increased production of animal heat, but may be due to decreased elimination. While heat is constantly being elaborated within the various tissues of the body, it is also regularly being dissipated from the body. Undoubtedly, many acute cases of fever are due to the disturbance of this relationship.

With these preliminary remarks we may proceed to the discussion of the subject of treatment of Fevers.

All fevers do not require treatment. Indeed, many are overtreated. Therefore, we may reasonably inquire what are the indications for treatment, when we should interfere and when desist. It is not alone the degree of fever that we should take into consideration, but even more important is the continuance of the fever and the influence of increased temperature upon the nervous system. The injurious effect of fever upon the nervous system is, to my mind, the most important reason for instituting treatment to reduce the temperature.

Infants vary greatly in their immunity to the effect of

fever. The degree of febrile heat that in one infant may have no deleterious effect, in another may cause most alarming symptoms. It will consequently follow that in one case we may feel it to be our duty to institute energetic modes of treatment designed to reduce temperature, whereas, in another case, we can safely desist from any active treatment.

Upon the subject of treatment I have nothing new to suggest. On the contrary, I wish to urge the application of old remedies, and to sound a note of warning against the indiscriminate use of drugs in the treatment of fever in infants. The increasing experience of each succeeding year more and more convinces me of the efficacy of water in the treatment of fever. The technique of hydrotherapy will vary somewhat from that in the adult. Greater care must be taken not to induce shock or excite fear. An efficacious mode of applying water in the treatment of fever in infants is by intestinal irrigation. In carrying out this treatment, it is better for the mother or nurse to place the infant upon her lap, as its movements can be more readily controlled. A rubber cloth, covered by a sheet, is spread across the lap; the end, reaching to the floor, can be placed in a wash bowl or other receptacle; a soft rubber catheter is attached to the nozzle of the fountain syringe, which should be hung about four feet above the child. One or two pints of warm water may be poured into the receptacle, and the catheter inserted into the bowels. As the water flows, cold water is gradually to be added. I think this prevents any undue shock to the child, and I am certain it lessens the resistance of the child to the application of the treatment. The practical point is to retain from half a pint to a pint of the cold water in the bowel long enough for the water to absorb the body heat. In order to accomplish this, it will necessary to exert firm pressure upon either side of the buttocks. It is just here that this method of treatment so often fails to reduce temperature, for the water is expelled from the bowel before there has been time to extract the heat. Again a considerable quantity of water is required. I should say from one to two gallons. With care, this mode of treatment is not painful to the patient, and is very certain in its results. For instance, I saw a child ten days old, on the night of May 29, 1900. Its temperature, per rectum, was $106\frac{1}{2}$. It had had one convulsion before my arrival and had another after I saw it, before I had time to begin any treatment. In that case I used about 6 quarts of water, beginning with the water at the body temperature. Within an hour after the commencement of treatment, the child was resting quietly, free from nervous symptoms, with a temperature of 100.

Another mode of treatment that in some cases is even better is the sheet pack. With infants, in order to prevent shock, I think it is better, after the patient's clothing has been removed, to wrap it in a sheet dipped in warm water. This is to be carefully and smoothly wrapped about the child. Over this a second sheet wrung out of cold water is to be applied. After the application of the second sheet, gentle friction with the hand, to prevent capillary engorgement, is indicated. In the application of this treatment, two symptoms should be constantly kept in mind. One is the character of the breathing, and the other is the tendency to cyanosis. Should the breathing become irregular, or the lips blue, during the application of this treatment, the child is to be removed from the pack, and placed between warm blankets. When the outer sheet becomes slightly warm, cool water can be poured, or, better still, rubbed over by means of a sponge. The important things to be remembered are the constant rubbing to keep up the cutaneous circulation and the constant addition of cold water. The application of this treatment will usually require from 10 to 15 minutes. At the end of this time the child is to be rubbed until the skin is dry and has a good, healthy glow. It is then to be placed in a warm bed. The repetition of this treatment will, of course, depend upon the recurrence of fever and its influence upon the patient. In many of the acute, febrile attacks that we are called to see, one treatment is sufficient. In cases where the fever has been complicated by convulsions, it is always best after the child has been placed in bed to apply cold cloths to the head, or to use a water bag for a pillow, and at the same time to apply heat in the form of hot water bottles or bags to the feet.

Another method of treatment that is of benefit in certain cases is the cooled bath. This is of especial benefit in scarlet fever with a high temperature. With young children an ordinary wash boiler is sufficient. This is to be filled half full of water at about a temperature of a hundred, as nearly as can be determined, and over the body of the boiler a sheet is to be spread. The patient, with clothing removed, is placed upon the sheet, and gently immersed into the water. When the body is covered up to the neck, constant friction with the open hand is to be made over the trunk and extremities. After the child has been in the bath two or three minutes, and has become accustomed to its surroundings, the water can be cooled down to 70 or 80 degrees by simply dipping out a quart of water, and adding a quart of cold water. During this process the constant friction of the body is to be continued. The duration of this bath may be from

8 to 12 minutes. At the expiration of this time the patient is gently rubbed, dried and placed between warm blankets.

I have thus far spoken only of the treatment of fever with a view to the reduction of bodily heat. In all cases it is understood that we attempt to remove the cause of the fever. As I have already indicated, in a large number of cases we are in doubt as to the cause, and therefore we have to treat the patient symptomatically. In a large number of cases in infants, the fever is due to some gastro-intestinal disturbance. In these cases we naturally apply remedies directed to correcting the condition of the stomach and bowels, and the treatment required will suggest itself in each case.

One point I think worth mentioning is the withdrawal of food for some hours. In many of these cases of high temperature in infants the digestive functions are in abeyance, and food acts not only as an irritant to the stomach, but it is highly probable that, owing to imperfect digestion, fermentation and other retrograde changes take place in this way, adding fuel to the flame.

The use of drugs simply to reduce fever will, in many cases, not be required, and in all cases great care is necessary. I will admit, however, that there are some cases where, in addition to the treatment already indicated, high temperature persists, and we are compelled to resort to drugs. In my judgment, the best is phenacetine. Where this is left to be given by the mother at her discretion, it is a wise precaution to instruct her that, should there be any blueness of the lips, to stop the remedy. In cases of extreme restlessness, I think that chloral hydrate given in one grain doses every half hour for three or four times, to children of a year of age, is excellent. In infants of six months, half a grain may be given. In many cases it will be found that the urine is highly colored and extremely acid, and that we can materially assist in controlling the temperature by stimulating the function of the kidneys is true. To meet this indication there is no remedy equal to citrate of potassium. This can be given in doses of from 3 to 5 grains, largely diluted in water. I saw a case during the summer of a child about six months old, where fever had persisted for a number of days in spite of treatment. The urine, as far as could be judged, was very scanty, highly colored, and upon testing on litmus paper was very acid. I placed this child upon the alkaline treatment indicated with a result that in two days the temperature had fallen to normal.

To recapitulate briefly, the treatment of fever in infants is to be governed by the effect of the fever upon the patient,

and is to be given when positively necessary, and their effects carefully watched. Withdraw all milk food for twelve hours or longer, studying carefully the condition of the stomach and bowels. Keep the patient quiet, and the results will be satisfactory equally to physicians and patients.—*The Medical Fortnightly*.

Progress of Medical Science.

MEDICINE AND NEUROLOGY

IN CHARGE OF

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MALARIAL INFECTION.

One of the most important questions in preventive medicine now before the profession is the one of transmission of malaria. The evidence that mosquitoes may and often do inoculate people with malarial germs has been growing stronger, but conclusive experiments have, up to this time, been lacking. It is a pleasure to note in the *British Medical Journal*, quoted by the MEDICAL RECORD that such experiments are being made in a way which will leave little or no doubt on this point. Five or six men have gone into one of the most malarious parts of the Campagna near Rome, have stayed there day and night breathing the air and drinking the water with no protection from malaria other than the careful avoiding of mosquito bites. What means they have adopted to this end does not appear. There is a certainty that so many people would not under ordinary conditions entirely escape the fever, so that, if these men escape, the evidence will be strong that they do so by protection against mosquitoes.

An even more important experiment on the positive side has been carried out by sending mosquitoes in cages from Rome to London. The mosquitoes were first fed on malarial germs, presumably by biting malarial patients, and sent to the School of Tropical Medicine in London. The son of the investigator, Dr. Manson, was bitten by these mosquitoes every other day until their death. He remained in good health for about ten weeks and then developed a typical intermittent fever, and plasmodia were found in his blood. This experi-

ment seems to be as conclusive as one trial can make it in showing that malaria may be transmitted by mosquitoes. Some weeks will be necessary in order to draw definite conclusions from the experiment carried on in Italy. If that one proves successful negatively, it will make a chain of demonstration which, if confirmed by subsequent observations, will set at rest not only the mode of communication of the malarial poison, but the best method of its prevention.

In *Harper's Weekly* of October 6 there appeared an interesting account of the great development of malaria in Italy in recent years. It seems that the improvements which have been made in grading and tearing streets and the making of other changes which result in the stirring up of the soil have caused a recrudescence of malaria to such an extent that individuals in some parts of the country have been compelled to flee to the mountains, and it has been thought that legislation would be necessary compelling the deportation of malarial patients. It begins to look as if pouring oil on the troubled waters in the shape of kerosene applied to stagnant pools to prevent the development of mosquitoes, and the use of mosquito-netting in affected localities, are measures better calculated to modify this curse of many tropical and temperate climate.—*Cleveland Journal of Medicine*.

TO CONTROL HIGH TEMPERATURES.

Dr. C. C. Booth suggests the following method of reducing a high temperature: "The patient is stripped entirely of all clothing, placed upon rubber sheet and covered with one thickness of a piece of cheese-cloth two yards long and the usual width, one end having been split so that each leg can be covered separately. A nurse is directed to squeeze water at about the temperature of the body from a sponge over the entire anterior surface of the body, and to wet the gauze freely as often as necessary to supply the water for evaporation. A case of typhoid fever, with persistent high temperature, is reported in which this method was used. From the beginning of treatment, the pulse, nervous system, temperature, strength and every symptom rapidly improved. The idea originated upon observing the depression of the wet bulb of a wet and dry bulb hygrometer caused by the evaporation of the water from the gauze, which is applied tightly to the bulb containing the mercury. All that is claimed for this method is that it is more convenient, more easily applied, less dangerous, cheaper and pleasanter to the patient than any other method. The gauze is to be kept wet until the temperature is reduced to normal."—*Philadelphia Medical Journal*.

DIGITALIS AND ITS DERIVATIVES.

From a study of digitalis and its derivatives the conclusions reached are as follows :

1. Digitalin and digitoxin each represent the full circulatory powers of digitalis.

2. Digitalis, digitalin and digitoxin stimulate the cardio-inhibitory mechanism, both centrally and peripherally. In larger doses they paralyse the intrinsic cardio-inhibitory apparatus.

3. They all cause a rise of blood-pressure by stimulating the heart and constricting the blood-vessels.

4. Very large doses paralyze the heart-muscle of the mammal, the organ stopping in the diastole.

5. Digitalin of Merck is a stable compound, 1 gram of it being equivalent to about 70 cubic centimeters (18 drachms) of tincture of digitalis.

6. Digitoxin is not to be recommended for human medication on account of its irritant action, which makes it liable to upset the stomach when given by the mouth, or to cause abscesses when given hypodermically, and on account of its insolubility, which renders it slowly absorbed and irregularly eliminated, having a marked tendency to cumulative action.—J. P. Arnold and H. C. Wood, Jr. (*Amer. Jour. Med. Sci.*)—*Pacific Medical Journal*.

THE URINE AS A DIAGNOSTIC FACTOR.

Dr. Kernode concludes an article with the above title, with the following succinct rules, formulated by a Dr. Formad and verified by many investigators :

1. Sediment in the urine has no significance, unless deposited within 24 hours.

2. Albumin in the urine does not indicate kidney disease unless accompanied by tube casts. The most fatal form of Bright's disease—contracted kidney—has little or no albumin.

3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate of lime crystal, which has its own peculiar form ; urine alkaline.

4. Every yellow crystal is uric acid if the urine is acid, or a urate if the urine is alkaline.

5. Mucous casts, pus and epithelium signify disease of the bladder or cystitis of other parts of the urinary tract, as determined by variety of epithelium.

6. The urine from females can often be differentiated from the urine of males by finding in it the tessellated epithelium of the vagina.

7. Hyaline casts (narrow), blood and epithelial casts

signify acute catarrhal nephritis. There is much albumin in this condition.

8. Broad hyaline casts and epithelial dark-green granules and oil casts signify chronic catharrhal nephritis. At first, much albumin; later, less.

9. Hyaline and pale granular casts and little or no albumin signify interstitial nephritis.

10. Broad casts are worse than narrow casts, for the former signify a chronic disease.

11. The urine should be fresh for a microscopic examination, as the micrococci will change hyaline casts into granular casts or devour them entirely in a short time.

12. Uric acid may, in Trommer's test for sugar, form a peroxide of copper, this often misleading the examiner into the belief that he has discovered sugar. Thus, when urine shows only sugar, the other methods of examination must be used,—preferably the lead-test.

13. The microscope gives us better ideas of the exact condition of affairs in examination of urine than the various chemical tests.—*Tri-State Medical Journal.*

COMPOSITION AND PHYSIOLOGICAL EFFECTS OF BEEF BROTH.

In a communication recently made to the Paris Academy of Medicine, and dealing with the physiological action of meat preparations, Armand Gautier (*Diet. and Hyg. Gaz.*) reports his investigations on the chemical composition and physiological effects of beef broth. A kilogram of lean beef boiled, with gentle heat and for some time, with three times its weight of spring water, yields from two to two and a half litres of bouillon.

When thus prepared, it leaves a dry residue weighing from 15 to 23 grams. This residue is composed of: Albuminoid substances, 6 to 9; kreatin bases, 0.9; xanthin bases, 0.25; inosinic acid, 0.04; taurin, etc., 0.12; inosite and glycogen, 1.40; lactic acid, 0.20; coloring, odoriferous and other undetermined matter, 4.60; soluble mineral salts, 3.76; insoluble mineral salts, 0.38. The total amount of mineral salts—4.14 grams—includes 2.60 grams of potassium acid phosphate, 0.70 of potassium chlorid, and smaller quantities of calcium phosphate, magnesium, iron, and a little sodium chlorid.

If beef broth is made, as is done in most households, by adding kitchen salt (7 grams per litre) and vegetables (carrots and turnips, of each 40 grams, leek and celery, 20 grams), the dry residue per litre weighs 27.3 instead of 19.1 grams;

that is, but 1 gram more, if we deduct the 7 grams of added salt. It follows from this that, contrary to what might have been thought, the common salt does not aid in dissolving meat in hot water, and that the vegetables furnish only one additional gram of dry extract per litre.

The conclusions drawn by Gautier from these data are the following: On account of the albuminoid substances it contains; on account of its sapid and aromatic substances which act by stimulating the sense of taste and the secretion of the stomach; in virtue of its kreatin and xanthin bases which, in small doses, play, like caffeine (which itself belongs to the xanthin group), the role of cardiac and muscular tonics; owing to its organic phosphorized derivatives of lecithin; owing, finally, to its assimilable soluble phosphates, well-made beef broth, is at once a food properly so-called, a stomachic which excites the gastro-intestinal secretions, and a general tonic. This suffices to explain the vogue which the good beef broth of our housewives has always had—and deservedly so, whatever may have been the prevailing theories.—*Pacific Medical Journal*.

TREATMENT OF INFLUENZA IN ADULTS.

R. B. Wilcox divides the disease into three types: (1) That in which the brunt is upon the respiratory system. (2) That in which it is upon the gastro intestinal system. (3) That of the neuro muscular system. The first type demands supportive treatment from the outset. Pay little attention to the reduction of the fever; if such reduction is demanded, depend upon the ice-water coil over the heart. Use no morphine to relieve the pain. To obtain free expectoration give ammonium carbonate in 5 to 10 grain doses. Relieve the nose and throat with menthol spray in albolene. Fluid diet. Substitute strychnine for the ammonia, if the latter is not well borne. Whiskey is not necessary. If pneumonia is present watch the skin, kidneys and bowels. Carbonate of creosote in sherry in 30-drop doses yields good results. For the gastro-intestinal form evacuate bowels with calomel, then antiseptics, such as bismuth. Intestinal irrigation; beef extract by the mouth. Rectal alimentation is frequently demanded. In the neuro-muscular type don't use large doses of quinine. Avoid the coal-tar derivatives alone. Use them carefully, combined with salicylic acid and caffeine. Gelsemium is recommended for the headaches and backaches. External hot applications will often relieve the backache. Warm baths are beneficial. The bowels should remain open. If urine is not sufficient; use high enemas of saline solution at 110 degrees.—*Med. News*.

THE TREATMENT OF GALL STONES WITH OLIVE OIL.

Kurt Witthauer assumes a conservative position in regard to operative interference for cholelithiasis, and advises medical treatment in cases in which there is no daily febrile movement nor palpable gall bladder. The most successful agent in his experience is olive oil in large quantities (12-16 oz.), daily given by mouth as long as the patient can stand it, and then by rectum. The stools should always be sifted, that no stones may pass unnoticed. In one case a patient passed one hundred and thirty-seven stones while under this treatment.

IODINE USED HYPODERMICALLY IN THE TREATMENT OF PULMONARY TUBERCULOSIS.

Alfred Careno Croftan declares that iodine is peculiarly a drug against which different subjects show marked idiosyncrasies. The chief symptoms observed are emaciation, usually accompanied by profuse sweats, some pyrexia, and an accelerated pulse; a peculiar psychical depression develops a form of hypochondriasis ("anxietas"). In the light of our theoretical beliefs the administration of iodine should act curatively in pulmonary tuberculosis. Accurate dosage is essential to the success of the plan of treatment that is being advocated; too large doses will certainly aggravate, too small doses will be inefficient. Iodipin injections were tried only on carefully selected cases. Twenty-seven cases have so far been treated with good results; nineteen were cases of incipient tuberculosis with only circumscribed areas of infection in one or the other of both apices. The results obtained so far are not conclusive, they are only suggestive, although they now appear to be sufficiently striking to warrant an optimistic view. The sooner the disease is recognized and treatment begun, the better the prognosis. Iodipin was employed in the form of the ten-per-cent. preparation, and the injections were made into the subcutaneous tissues between the skin and the muscle, preferably in the gluteal and interscapular region. Beginning with one drop of iodipin, which, to give the necessary bulk for hypodermic administration, was dissolved in half a drachm or so of sterilized oil, the injections were gradually increased, one drop being added to the dose each day. The dosage was regulated by the symptoms; as soon as an improvement became apparent the dose exhibited at the time was continued for a period of thirty to sixty days. If the quantity at

first acting beneficially seemed to grow insufficient, the dose was again increased drop by drop; more than sixty minims a day have so far never been given. The writer believes pulmonary tuberculosis in its incipiency, before it has become a mixed infection, to be one of the most easily curable of bacterial diseases.—*Journal of the American Medical Ass'n.*, Nov. 17, 1900.

HEADACHE FROM EYE STRAIN.

(Wood, *Med. News*, July 28, 1900).—The site of ocular headaches in order of frequency is as follows: Supra-orbital, deep orbital, fronto-occipital and temporal. The character of the pain is not peculiar, but is more likely to be dull and heavy than very acute. The supra-orbital form is generally accompanied by aching in the eye-ball, and by a deep intercranial ache. Ocular headaches are almost always accompanied by signs and symptoms easily referred to the eyes, and the exciting causes, such as tasks which require the use of the accommodation and convergence, are peculiar, and will help in the diagnosis. For instance, after reading awhile, the letters may run together, the sclera may become hyperemic, and the lids show signs of inflammation. There may be photophobia or specks floating before the eyes. Astigmatism is the most frequent cause, and its diagnosis, in the absence of complicated apparatus, can best be made with the visual test card, the astigmatic chart and Pray's astigmatic letters. Weakness of the extrinsic eye muscles is, to some unknown degree, the cause of ocular headache. Of headaches that simulate the ocular headaches the most difficult to differentiate is the supra-orbital or supra-nasal pain of nasal disease. In these cases, however, there are usually other symptoms, and the pain continues through the night, which does not occur in eye-strain. Supra-orbital malarial neuralgia may be detected by its periodicity and by its being paroxysmal and unilateral, and not accompanied by other asthenopic symptoms. Headaches, due to organic disease of the eye, are practically incurable. If from acute disease, it may be cured by treatment of the acute affection. In the treatment of eye strain proper, such conditions as insomnia, dyspepsia, excessive indulgence in tobacco and alcohol should be attended to and pelvic disorders should be looked after. As far as local applications are concerned, the use of hot or cold fomentation is the most effective and the least harmful. Spirits of camphor, ointment of veratrine or aconitine, or a liniment containing chloroform, camphor and tincture of aconite frequently give relief. A weak galvanic current may give temporary relief.

THE CURABILITY OF INEBRIETY BY MEDICAL TREATMENT.

(Crothers, *Virginia Med. Semi-Mo.*, October 12, 1900)—Thirty to forty cases recover under hospital treatment. Inebriety is now recognized as a distinct neurosis, in which there are certain defects of growth and development that produce a susceptibility to the action of alcohol. The drinking of alcohol is not the disease, but the symptoms of some central irritation and of poisoning and starvation. The medical treatment must be based upon some clear conception of the nature of the disease and the conditions present. The complete removal of all spirits at the beginning is followed by the best results. The reaction which follows can be neutralized by the use of strychnine or sodium bromide in large doses. A calomel or saline purge should be given and followed by a prolonged hot air or hot water bath with vigorous massage. In this way the ptomaines may be removed; and the second indication, that of starvation, should be met by food and tonics. The removal of spirits in all cases reveals conditions of physical and mental degeneration that calls for a great variety of therapeutic measures. The next question is to ascertain the special exciting causes, and remove them: overwork, neglect of hygienic care of the body, irregularity in habits, emotional excitements and depressions, etc. Before a cure can be said to be complete, the underlying cause which produces the craving for the anesthetic and stimulating effects of alcohol must be neutralized and prevented. In certain cases the attacks are preceded by premonitory symptoms, and purges and prolonged baths are of great value. Quassia often does good. After the drink paroxysm has passed away, changes should be made in the diet and living, and constitutional remedies are to be used. Narcotics are to be avoided. Strychnia in large doses frequently repeated, then discontinued for awhile, seems to be the most efficient. Iron, phosphorus, arsenic, potassium and the bitter tonics should be used alternately. Whether treatment will be most effectual at home or in a hospital depends on the case. Most cases can be best treated in a hospital or asylum.

PROFESSOR KOCH ON MALARIA.

At a recent meeting at Berlin of medical men and others interested in the investigation of malarial disease, Professor Koch gave the results of his recent researches. He concurred in the view that the developed parasite, the cause of the fever, was introduced into the human body by mos-

quitoes, but he expressed the opinion that the permanent home of the parasite was in the human body itself, only one phase of its existence being passed within the mosquito. If this view be correct, it is evident that to combat the disease we must begin with the persons actually suffering therefrom, and not with the mosquito, which is merely an intermediary host. This line of reasoning is not quite clear, because if we could suppress any one link in the morbid chain the parasite would not undergo development or would not be transmitted. Even assuming, however, that by suppressing the mosquito we could stamp out the disease, Professor Koch points out that the task is one beyond our accomplishment, and although some measure of protection against mosquito bites might be practicable, it must, on the whole, prove hopelessly inadequate. At present, the Professor pins his faith to quinine both for prevention and by way of treatment, so that, from his point of view, no progress has so far been affected in this direction.—*The Medical Press.*

MEDULLARY COCAINISATION.

The induction of anæsthesia during labour, by means of the injection of solutions of cocaine into the spinal canal, is attracting considerable attention in the United States just now. The method is seriously discussed at the societies, and the medical journals discuss its merits with a calmness suggestive of benignant approval. In spite of the glowing accounts given by those who have taken up this new fad, we still hope that no haste will be shown on this side of the Atlantic to follow their example. We fail to discern any tangible advantages over anæsthesia by chloroform or ether; the drawbacks are numerous, and the risks are necessarily great, so great indeed that one is surprised to find men willing to risk so much in exchange for so little. The immediate sequelæ of the operation—nausea, headache, vertigo and general prostration, are always more severe and of longer duration than those which follow the administration of chloroform or ether, and instances are on record in which they have lasted as long as eight days, and others in which the injections were followed by rigors, fever and death. We do not hesitate to declare that an obstetrician or surgeon who should employ this method with an unfortunate result would thereby incur the most serious responsibility, and we cordially concur in the remark of the editor of the *New York Medical News* that “for the present we must regard medullary narcosis not as an accepted fact, but as something still in its chrysalis stage.”—*The Medical Press.*

TYPHOID FEVER.

Diet.—In the vast majority of cases of typhoid fever, milk is the safest and most satisfactory diet. As to the quantity required, it may be put down for an adult at from four ounces as a minimum to eight ounces as a maximum every two hours. If there is diarrhœa, the milk should be boiled or peptonized. If the stools contain fragments of undigested casein, the quantity of milk ingested is too large and must be reduced. Should the use of the smaller amount be followed by similar evidence of indigestion, dilution with water or carbonated water should be practiced, or peptonizing again employed. Rich milk should always be avoided.

The first condition which may demand a deviation from the milk diet is an inability of the patient to take milk, either because of its disagreeing with him, or because of some insuperable prejudice against it.

A second effect of a milk diet which sometimes demands deviation from it is an increase in the tendency to constipation, which sometimes occurs in typhoid fever and which undoubtedly milk favors. In such cases milk should not be boiled. The tendency may be further counteracted by the addition of buttermilk, of animal broths,—particularly chicken-broth,—or beef-juice and the various forms of peptonized foods, either liquid or reduced to the liquid form by the addition of hot water. Should evidences of inability to assimilate milk continue to present themselves after reducing the quantity to reasonable limits, there is no more satisfactory nourishment than albumin-water, which consists of the whites of eggs mixed with water in varying proportions. The whites of two eggs to a pint of water may be considered an average proportion. A little lemon-juice—a fluidrachm or more—may be added to the pint as a flavor, or the same quantity of brandy or whisky.

The occurrence of hæmorrhage calls for an immediate reduction in the amount of food. The reduction should be positive, and it may be that for a number of hours it is better to give no food at all. When total cessation of food is not deemed necessary, the quantity of milk may be reduced to half an ounce or an ounce every two hours until the danger of hæmorrhage has passed away. The same is true of food in perforation of the bowel.

Most important are correct notions as to the transition from the diet of one actually ill from typhoid fever to that suitable to convalescence. An arbitrary rule of which it may be said that, if it errs, it errs on the safe side, is to adhere to liquid food in the shape of milk or broths, beef-

juice, or albumin-water, until the temperature has been normal one week. Then a single soft-boiled egg may be allowed. If nothing happens in twenty-four hours after this, an egg daily may be allowed. If after two or three days everything goes well, a small dish of very soft milk-toast is to be permitted. If all continues well, a small quantity of boiled rice or of strained, well-cooked oatmeal is added. Next a small piece of steak may be chewed, or, if in season, two or three small raw oysters. And thus one article of food is added after another until a reasonable diet is taken. Chicken is one of the last foods allowed. Even earlier than at the end of a week of normal temperature a raw egg may be given mixed with milk, or perhaps a little sherry or whiskey to flavor it if the patient complains of being hungry or it is thought he is not being sufficiently nourished:—James Tyson? (*Penn. Med. Journ.*)—*Monthly Encyclopedia.*

SURGERY.

IN CHARGE OF

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EAR VERTIGO CHRONIC.

C. H. Burnett, in the *Philadelphia Medical Journal* for September, 1900, writes on the treatment of this condition. He considers it due to mechanical causes, consisting chiefly in an impaction of the stapes in the oval window, and that liberation of the stapes with removal of retroaction force will cure the trouble. In doing the operation he considers that general anesthesia is necessary, for the reason the cocaine is not sufficient to cause complete relief from pain; besides, is liable to produce an infection. The external canal and the membrana tympani should be sterilized by a solution of mercury bichloride (1 to 5000), or a formalin (1 to 1000). He illuminates the auditory canal by means of an electric head-light held on the forehead and run by a small portable storage battery made for the purpose. When the membrane is intact, as it is, where the trouble is due to a chronic catarrhal otitis media, the initial incision is made with a delicate knife. Beginning close behind the short process of the malleus; he

follows closely the periphery backward and downward until he reaches a point below the line drawn horizontally through the umbo of the membrana. Little bleeding, as a rule, will occur. The flap made by this incision is pushed inward toward the promontory by means of a probe armed with a small piece of sterilized cotton. If there is no bleeding, the incus-stapes joint is seen as soon as the flap is pushed inward. If there is bleeding, it must be mopped away with sterilized mops on a cotton holder. The incus, now in plain view, should be disarticulated from the stapes by drawing the incus outward and downward by means of an incus hook-knife passed behind its long limb. When this is done the long limb of the incus is grasped by special forceps and drawn cautiously downward and outward into the auditory canal, and then removed entirely from the ear. This accomplished, the operation is finished. The meatus is then mopped out and packed with sterilized cotton for twenty-four hours or longer, unless the cotton gets moist with the blood or serum. If the latter occurs, the cotton should be removed and dry cotton replaced. There is no after-treatment.

In purulent cases the mode of operation is different. In these cases the membrana tympani is already perforated, and the ossicles, if still present, are plainly visible. The incus should be detached and removed first, and then the remnant of the diseased membrane and malleus should be completely incised. In such cases the hemorrhage is quite free, and hence delays the operation. After the operation the ear requires syringing with bichloride (1 to 5000). The ear should not be stopped with cotton, but allowed to discharge. The subsequent treatment is that of chronic otitis media purulenta.

TREATMENT OF LACERATED WOUNDS.

The wound is cleansed with soap and water without much scrubbing. A large piece of cotton, wet with bichloride, is laid upon the wound for a few minutes while the report of the case is being taken, after which the wound is revised, if lacerated. Careful examination should be made at the first dressing and the extent of the injury accurately noted. If the tendons or nerve trunks are severed, they should be at once united. In cases requiring tendon or nerve-suture a general anæsthetic should be given. In nearly all other cases it is unnecessary; either no anæsthesia or local anæsthesia may be used. In the revision of the wound just as little as possible of the lacerated tissue should be cut away. It is better to dress the wound with doubtful tissue remaining than to sacrifice some that might have been saved.

When in doubt, no finger should be sacrificed without first giving it a chance to be saved.

It is personally an almost invariable rule never to suture a lacerated wound. If suture material is required, silk-worm gut should be used. Instead of suturing the wound, it is brought in apposition as nearly as possible and held there by a wet gauze bandage, the bandage being wet in a solution of corrosive sublimate, generally 1 to 1000. After the parts have been brought together by a gauze bandage, the wound is dressed by applying very profuse dressing of gauze and cotton, all wet with bichloride solution. Wet from moist is distinguished by having the former saturated and the latter wrung dry. A wet dressing should always be used for the first dressing, and if at the next dressing there are no signs of infection a moist dressing may then be used. If dermatitis is present a dry dressing should be used. Whenever the laceration is near a joint the lacerated part should be put at rest, either by a splint or by fixation to the body.

The first dressing should remain on, unless there are indications for its removal, at least two days. If there are no indications of sepsis, a new dressing is quickly applied. The wound is dressed about every second day with a moist dressing, unless granulations make their appearance, when a dusting-powder may be applied. Boric-acid powder being most efficient, dry dressing and sterile gauze are used from now on until the wound is healed. In the later stages of healing, when the danger of infection is practically over, the patient is often directed to remove the bandage and bathe the wound for ten minutes in very hot water and then reapply the sterile gauze, this to be done twice a day. W. E. Lower (Bull. Cleveland Gen. Hosp., April, 1900). — *Monthly Cyclo-
pedia of Practical Medicine.*

SPRAINS.

Treatment.—Pressure is usually applied by bandage, but there is an intelligent and a non-intelligent method. If an ordinary bandage merely be bound round the joint, the chief part of the pressure is made on the prominence of bones at the joint, but pressure must be made so that it is brought to bear evenly on all parts of the capsule which can be got at. For example, in the case of the ankle-joint, a bandage around the ankle merely presses on the external and internal malleoli and on the tendo achillis behind. But, now, if three or four layers of cotton-wool be placed on the joint with a little additional amount in front of and behind the internal and external malleoli and the bandage be then applied, the cotton-wool sinks into the various hollows and effectually

compresses the distended capsule. So that, if the sprain be seen within the first two or three hours of its occurrence, the following treatment should be carried out. Apply cold vigorously for from about ten minutes to a quarter of an hour, either by pouring cold water over the joint or by the application of ice or spirit lotion and then wrap the joint round with lint or other suitable material soaked in cold water or spirit lotion, put on the cotton-wool in the manner just indicated and place the joint in such a position that there is at least potential cavity for effusion to be poured into and firmly bandage the part.

During the period of quiescence the same line of treatment should be adopted. But when the second attack of pain ensues and it is becoming more severe, the application of cold is not of much value. The right thing to do is to apply heat. The joint should be kept at rest and pressure should be maintained on it by cotton-wool and a bandage, since well-directed pressure also assists absorption.

As a rule, most joints are rested too long, and at an average of three or four days after the swelling has subsided movement of the joint should be commenced. The direction of the movement is a most important point. One can ascertain by the position of the tender spots and by the distribution of extravasated blood which part of the joint has been most injured. Take, for example, injury to the external lateral ligament of the ankle; no one would be so unwise as to invert the ankle as a part of the early movements, but would flex and extend and carefully evert it so that while moving the joint he would be in no way interfering with the healing of strained and of ruptured ligaments. If the patient have a tuberculous tendency or a gouty or a rheumatic-gouty history, he should rest much longer than should a patient with an ordinary history.

When the amount of swelling is very considerable, hot applications and rest are not sufficient. The best thing is properly applied friction. In rubbing the parts it is always advisable to begin to rub that part of the swelling which is most distant from the joint. Together with rubbing, frequent application of hot water and gentle movement should be carried out. If, after ten days' treatment on these lines, the thickening about the joint has not disappeared and there still remain tender spots on moving the articulation and on pressure, counter-irritation by blisters is called for. As a rule, one may say that in a fortnight or three weeks with the above treatment a severe sprain will cease to give rise to trouble and inconvenience and the patient can go about with comfort. Sometimes, however, it happens that, on the patient attempting to use the joint, acute pain sets in. The

treatment is absolute and complete rest, which is easily effected by means of a plaster of Paris application, and from four to six weeks is not too long a period to keep such a joint entirely at rest. A. H. Tubby (*Lancet, Monthly Cyclopaedia*).

THE SURGICAL TREATMENT OF VARICOSE VEINS.

John O Connor (London *Lancet*), Senior Medical Officer British Hospital, Buenos Ayres, recommends a method of treating varicose veins by extirpation of the diseased portions of the vein or veins, with primary ligation of the internal saphenous veins at the saphenous opening. W. H. Bennett and F. A. Southam express satisfaction with the results obtained from similar treatment. O'Connor describes his operation in the following manner: "The operation which I have practiced during the past four years is as follows: The limb having been shaved and disinfected from Poupart's ligament to the ankle, a two-inch incision is made over the saphenous opening, and the internal saphenous vein is doubly ligated and divided; if no varicosity is present above the knee the wound is closed and dressed at once with dry sterilized gauze. If the femoral portion is affected the vein is dissected up after ligation at the saphenous opening, and its branches are seized with pressure forceps and ligated. Generally, if varices are present above the knee, there are also some below, and when such is the case the incision is prolonged downward directly over the vessels, until the lower limit of the disease is reached. In the last case on which I operated I had to make an incision 27 inches long, through which I removed 43 inches of diseased internal saphenous vein and branches. If the varices do not extend above the knee, after occluding the saphenous trunk as described above, an incision is made over the affected portion, a ligature is applied above and below and the whole intervening mass is removed by dissection. All branches are caught up by pressure forceps, and when the main channel is removed they are ligated with fine catgut. As frequently the external saphenous vein is also affected, its varicose condition is dealt with in a similar manner. To some this plan may appear formidable, yet, if the internal saphenous is primarily ligated at the saphenous opening, there is little danger of embolism, etc. I have also employed this method for removing thrombose veins occurring after and during pregnancy with most satisfactory results, and in six cases of phlebitis I have found extirpation concluded the matter.

In closing these long wounds I consider the blanket suture recommended by Cheyne and Burghard most useful, as it can be rapidly inserted, and does not strangle the tissues like the old continuous suture.

Therapeutic Notes.

ACUTE RHEUMATISM.

A useful lotion to be applied to the inflamed joints on warm lint is that of Dr. Fuller :

Ry Tinct. opii	dr. i
Potass. carbonatis.....	dr. ss
Glycerini.....	dr. ij
Aquæ.....	dr. ix

The dressing should not be covered by any impermeable material.—*Amer. Text Book of Applied Therapeutics.*

SPRAY FOR A ROOM OCCUPIED BY A CONSUMPTIVE.

Free ventilation should be used in addition.

R Guaiacol.....	ʒ ij.
Eucalyptol... ..	ʒ ij.
• Menthol.....	ʒ i.
Thymol.....	ʒ ss.
Ol. gaulther.....	ʒ vij.
Ol. menthæ pip.....	...q. s. ad. fl. ʒ i

—*O. F. Baerens, Regular Medical Visitor.*

RETENTION OF URINE.

R Extracti opii.....	gr. ij
Extracti hyoscyami.....	gr. j
Olei theobromatic.....	q. s.

M. Fiant suppositoria No. ii. Sig.: Introduce a suppository into rectum and immerse body in hot bath for half an hour. *Indications* : Used in retention due to swelling and inflammation of urethra in gonorrhœa. After the opium and hyoscyamus have been absorbed a brisk saline purge should be administered and leeches applied to the perineum.

Jottings.

PARALYSIS AGITANS.

The drugs that are in use for paralysis agitans, and from which some benefit in dissipating symptoms and fulfilling indications may be expected, are hyoscyamus and duboisine, Indian hemp, opium, hematogenous agents (such as arsenic and iron), and occasionally gelsemium and veratrum viride. Of these the most important by far are the first mentioned. Given hypodermically, which is the preferable way when possible, or by the mouth, they promptly mitigate the severity of the tremor, and have a pronounced tendency to relax muscular rigidity. They are both powerful toxic agents, and must, therefore, be given with care.—*Drs. Joseph Collins and L. F. F. Muskies, in N. Y. Med. Jour.*

FOREIGN BODIES IN EAR.

I have found no object in the ear which could not be syringed out. But the fountain syringe is not the instrument with which to do it.

The *sine qua non* of success is a much stronger current of water than the fountain supplies. A good strong piston syringe, used by aurists for this work, is about the best to be had. A good quality, high-grade Davidson's syringe, however, gives quite a strong stream, and answers all requirements in most cases. A good, strong stream is the requisite to success; yet this is not all. I have syringed faithfully with a good instrument without success until I put the auditory canal on a stretch by catching the back of the ear between thumb and finger, and pulling outward and upward, when the object would immediately pop out.—*Amer. Practitioner and News.*

PERSISTENT VOMITING.

Mitchell has used cold water in the treatment of persistent vomiting with much success. He applies to the epigastrium towels wrung out of ice-water, which are changed every minute until the vomiting ceases. The treatment will be successful usually in fifteen or twenty minutes, and may then be discontinued, to be resumed if necessary. By these simple measures he has succeeded in stopping dangerous vomiting in a large number of instances—after childbirth, for example, when medicines and other external applications have failed to give relief.—*Vir. Med. Jour.*

NUX VOMICA.

Nux vomica used specifically becomes an invaluable remedy. Five drops of nux in half a glass of water, a teaspoonful every hour or two, in atonic gastric and intestinal troubles, tongue coated pasty yellow, pale; pale mucous membranes, nausea, vomiting; acute pain in the small intestines; acute pain at the umbilicus, with pale circles around the mouth; general inactivity, indisposition, feebleness. These are the indications for this remedy.—*Chicago Medical Times.*

PUERPERAL CONVULSIONS.

Subcutaneous or rectal injections of normal salt solution will save life. A hot salt solution thrown into the transverse colon had the most instantaneous effect on a convulsed patient I ever saw. She had been in convulsions for four hours, and after using the hot salt water (one-half gallon), her kidneys acted, she began to sweat profusely, relaxation was complete, the strain taken off the nerve centers, and the lady was restored to her family, and to-day is a happy wife and mother.—*Dr. John F. Watson, in Medical Council.*

DR. Stephen Harnsberger, in the *Philadelphia Medical Journal*, recommends as an excellent remedy in a "cold" the administration of 30 grains of Bi-Carbonate of Potash every four hours in a glass of milk or cold water. The patient should rest in bed for a couple of days and live entirely on a liquid diet.

PRIVATE WARDS QUESTION.

To the Editor CANADA MEDICAL RECORD.

An article in the last issue of "Montreal Medical Journal" on this subject is so misleading that I venture to call your attention to some of the statements contained therein.

I would like to say, first, that I have not been associated with, or attended the meetings of the mover and supporters of the resolution which led to friction in the Medico-Chirurgical Society, that it concerns me very little personally whether the private wards of all the Montreal hospitals are opened or not, for during the past twenty years of my practice in this city I have been fortunate enough to obtain all the private ward accommodation that I wanted; directly or indirectly. Hence, I may be given credit for discussing this question with some degree of impartiality, and shall

attempt to view the abstract question on its merits, pure and simple.

The writer of the article says: "Let us consider this question in the light of plain facts and common sense," and, while fully in accord with the proposed basis of argument, what follows in the article, when viewed from an impartial standpoint, seems widely divergent from such a basis. He says that "the mover of the resolution has an extraordinary misconception of the real position of the medical profession in regard to public hospitals." If the view of this question be restricted to the narrow horizon of Montreal hospitals, then the accusation would hold; but I think it can be proved to any unbiased mind, "in the light of plain facts and common sense," that the writer of the article referred to is the man who labours under a wonderfully perverted view of the real position of the profession in the matter.

To enable us to judge fairly, let us look beyond our own immediate circle and see how this question is regarded outside of Montreal. I undertook, when the subject was first mooted, to correspond with most of the largest hospitals as far south as Baltimore and as far west as Chicago. The official replies received from these institutions, admittedly the largest and best on this continent, are as follows:—

Toronto Genl. Hospl.—We admit outside physicians in good standing to treat their patients in our private wards.

Buffalo Genl. Hospl.— do do

Presbyterian Hospl., Chicago.— do do

Harper's Hospl., Detroit.— do do

Bellevue Hospl., New York; Massachusetts Genl. Hospl., Boston and Cook County Hospl., Chicago, are all free hospitals and have no private wards.

The following exclude outside physicians from their private wards, viz:—Johns Hopkins' Hospl., Baltimore; St. Luke's Hospl., New York, and the University of Pennsylvania Hospl., Philadelphia.

Permit me to quote extracts from two private letters—Dr. Casey A. Wood, of Chicago, formerly of this city, a graduate of Bishop's College, and a well-known authority on Ophthalmology writes: "When I came to Chicago about the same state of affairs obtained with reference to public hospital service as you inform me is prevalent in Montreal. Now, with perhaps one notable exception, every institution is open to any reputable physician. Even in the case of hospitals controlled by medical schools, an outsider in good repute is allowed to bring his private patients into the wards and make use of the operating room if he so desires.

"In some of the larger hospitals the private wards only are "open."

Dr. Heyd, of Buffalo, a McGill graduate, now twenty years practicing in that city, writes:—"You are going through "just what every large city has fought out, etc."

Considering these statements, Mr. Editor, and from what information I can glean elsewhere in smaller towns, it seems pretty clear that the great majority of hospitals on this continent open their private wards to reputable outside practitioners, and that, as far as Montreal is concerned, we are only a decade behind the age in this regard. The three hospitals quoted, as opposed to this liberal spirit, are somewhat of the nature of "close corporations," and, having large revenues, do not aspire to the position of a popular charity. But we know that even the large institutions which maintain the "open door" policy have also immense vested interests which are safeguarded by some of the most prominent citizens in the various towns where these hospitals are located, and, with this knowledge, is it not reasonable to suppose that "common sense" enters into the management of them.

Regarding surgical cases, I think it would be a risk to give all and sundry, who might apply for it, the use of a hospital operating room. There are a good many operators, but it takes ten years of hospital work to mature a good surgeon, so that in this direction certain restrictions would not be objected to by fair-minded men. Allowing the use of operating rooms is not a novelty even in this conservative town, for outside surgeons are frequently given the facilities of operating in both the Hotel Dieu and Western Hospitals, and thus far the result has been general satisfaction.

The statement that hospital management would be interfered with and hampered by opening private wards is too absurd to call for reply, in face of the many years' experience in the great institutions where the privilege is granted, and in view of the fact that whoever treats a patient in a hospital private ward, be it an outsider or a member of the staff, must conform to all existing hospital rules.

Trusting that the foregoing data will at least convince all unbiased minds that the question is a fairly debatable one, and that it may be conceded, I have discussed this subject strictly within the limits of "plain facts and common sense," believe me,

Faithfully yours,

GEO. T. ROSS,

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Editorial.

CLASSICAL EDUCATION FOR MEDICAL STUDENTS.

There are many in the medical profession to-day who question very much the wisdom of young men who desire to become physicians devoting so much of their school training in the acquisition of Latin and Greek. No one who gives the matter careful consideration, unless unduly prejudiced, but must admit that it is quite possible to become a skilled physician and surgeon without having devoted a great deal of attention to the dead languages. This subject has been brought prominently before the profession of Great Britain by a lecture delivered at the opening of the present session of the University College of South Wales by Sir John Williams, who discussed the question from practically every standpoint. He said there was a time when a knowledge of the dead languages was an indispensable preliminary to the acquirement of information of any kind, but that time is long past. He asks, "What is the value of Greek and Latin to a professor of the art of medicine?" To this query he replies in the words of a distinguished scholar: "As to doctors, can we gravely admit that they ought to understand the language in which their prescriptions are written, and that they find it instructive to read Galen and Hippocrates in Greek? To men of science it is pointed out that

their ever-increasing technical terminology is systematically formed from Greek and Latin words. This is true, and it is also true that a man of science might obtain a perfect grasp of this terminology by means of a list of words that he would learn in a day, and the use of a dictionary that he might acquire in a week." The advocates of a classical education say : * * * "However, it may be necessary to know Greek and Latin in order to understand English, to develop the mental faculties and to gain general culture." Again, "if we do not teach a boy Latin or Greek, we cut him off from the highest literary enjoyment, and we prevent him from developing his taste by studying the best models."

To all these arguments Sir John Williams, M.D., says "it would avail little to call in question the surpassing excellence of ancient literature. But it will not be denied that in the English, French and German languages there is sufficiency of good literature to fill the leisure of a person engaged in any active calling, a sufficiency of work calculated to give a high kind of enjoyment and to cultivate very adequately the literary taste. And if such a person was ever visited by a painful hankering after the time-honoured volumes that were sealed to him, he might console himself by taking note how often his contemporaries who had enjoyed a complete classical education were in the habit of taking down these master-pieces from their shelves. For I cannot help thinking that classical literature, in spite of its enormous prestige, has very little attraction for the mass of even cultivated persons at the present day."

"The fact seems to be that with comparatively rare exceptions a classical education is pursued not for the culture which it gives, but in order to acquire the instruments for special pursuits in after life, such as theology, philology, history, archæology and the profession of teaching. Those who prepare for such pursuits specialize from the first, for they devote themselves from the beginning of their education to gain command of the instruments with which they will work in after life, while those devoted to science are made to learn that which is of little or no use to them in their after pursuits." To a lad destined for the medical profession, Sir John Williams says, "what command does he acquire over

the Greek and Latin languages. Greek is not now compulsory, while the knowledge of Latin demanded does not enable him to read the easiest Latin book, except with difficulty and the aid of a dictionary. What then should a boy destined for Medicine learn. I should say that, in addition to those subjects generally taught in schools, he should have a thorough course of English language and literature. This will do more to train his intellectual faculties, to give him a command of language, a vocabulary, a taste for good literature, and a culture far larger and better than he can obtain by acquiring an elementary knowledge of Latin, which will be of no use to him, is too scrappy to be a source of intellectual enjoyment, and which in short will be forgotten; French and German should also be learned. I believe the power of reading both languages with ease could be acquired in the time now devoted to learning Greek and Latin. The knowledge of these two modern languages is essential to a practitioner * * * for the work done in the laboratories and hospitals of France and Germany is of such a high order that no one who is ignorant of it can be considered abreast of medical knowledge."

Writing of this lecture the *Dublin Medical Press and Circular* says: "We are pleased that one occupying so conspicuous a place in the profession should have raised his voice against an indefensible adherence to an anachronistic system of education," and in this expression of opinion we are inclined to agree.

The proprietors of Lactopeptine, Liquid Peptonoids and Haemaboloids are about to publish a volume of 64 pages, entitled "Facts and Figures, Medical and Otherwise, compiled from the Last Census of The United States." Fully one-half of this volume (32 pages) is made up of full-page colored lithographic maps and schematic diagrams, illustrating in a thoroughly clear, concise and graphic manner the most interesting and important subject matter, so that the reader can comprehend and appreciate it at a glance.

The following are some of the more interesting and important statistics thus graphically illustrated: "Accessions of Territory"—a map of the United States, showing, by

means of contrasting colors, our original territory and subsequent accessions, with the dates, amounts paid and from whom purchased or ceded; "Distribution of Population by States"—a map similarly vari-colored, showing at a glance the comparative density of the population of each State and territory, "Increase and Decrease of Population, 1890-1900"—illustrating the percentage of increase of each national subdivision; similar maps of Cuba and Porto Rico, respectively. Of medical and climatological interest are maps and diagrams illustrative of the comparative mortality of the various infectious diseases in the twelve principal cities of the United States; diphtheria mortality of New York, Massachusetts, Philadelphia, England, London, Chicago, Berlin, Paris, etc., showing graphically the pre- and post-antitoxine death rate; mortality from anesthetics; ratio of deaths to inhalations; maps showing variations of altitude, sunshine, rainfall, etc., of different sections of the United States; schematic design showing comparative elevation above sea-level of the principal health resorts, with climatological and meteorological data relating to each. Other attractive charts represent the division of the population of each State and territory as regards city and country dwellers; color, race, etc.

Those of our readers who desire to receive a copy of this most useful book must apply to the New York Pharmacal Association, Yonkers, N. Y., U. S.

A DISGRACED AMBULANCE CORPS.

In February, 1900, fifty-eight men, including six physicians, styling themselves "the Chicago Irish-American Ambulance Corps," left that city to help the Boers in the Transvaal. One of the men went as a nurse, the other fifty-one were "Bearers." Before starting, each of the fifty-eight men went before a Justice of the Peace and made affidavit that he was going to South Africa, not as an ally of the Boers, but as an ambulance man, and each man pledged himself not to fight. They were given a red cross flag, and were recognised as a Red Cross Auxiliary. The six physicians and the nurse adhered to their pledges, but all the others entered the fighting rank of the Boers just as soon as they reached the

Transvaal. Some of them were killed, some were captured, and a few are still fighting. The rest, having escaped, returned to the United States a few weeks ago, and were very coldly received; instead of congratulations they received reproaches for having perjured themselves.

OBITUARY.

Dr. James Macleod, of Charlottetown, died on the 22nd of December last, after an illness lasting eight months. He graduated from McGill University in 1873, and soon took a prominent position among his confrères on the Island. He was greatly esteemed, and his loss is a great one to those among whom he practiced.

Dr. Edward Farrell, of Halifax, died on the 1st of January last. He graduated from the College of Physicians and Surgeons of New York in 1864. After graduation he served as a House Surgeon in Bellevue and Charity Hospitals, and then established himself in practice at Halifax, where he quickly gained a reputation as a surgeon of more than ordinary ability. In 1899 he attended the International Congress at Berlin as the delegate of the Dominion Government. His report of that meeting was very careful and exhaustive and worthy of the man. At the time of his death he was Professor of Surgery and Dean of the Medical Faculty of Dalhousie University. His age was 57 years.

PERSONAL.

Dr. F. J. Shepherd, Professor of Anatomy, Faculty of Medicine, McGill University, Montreal, has been elected a Vice-President of the Cuban Medical Congress and President of the section of Pathology. The congress will meet in Havana in the early part of February.

Dr. Oscar F. Mercier, of 144 St. Denis Street, Montreal, has been appointed Surgeon to the Notre Dame Hospital in place of the late Dr. Brosseau.

Sir James Grant, M.D., of Ottawa, has been elected President of the Canadian branch of the St John's Ambulance Association in place of the late Sir Alexander Kirkpatrick.

Surgeon Major C. W. Wilson, of the Second (Service) Battalion of the Royal Canadian Regiment, who has returned from service in South Africa, was entertained at dinner on the 21st of December at the St James Club by a large number of his professional brethren. The chair was occupied by Dr. F. J. Shepherd and the vice-chair by Dr. Roddick, M.P.

Surgeon-Major Worthington, Royal Canadian Artillery, of Sherbrooke, who recently returned from active service in South Africa, was, on his arrival home, received with a popular demonstration, and presented with an illuminated address. He is to be entertained, later, at a public banquet.

H. Lightstone, a medical student of Bishop's College, who went to South Africa as a private in E Battery of the Royal Canadian Battery, has returned, looking all the better for his active service against the Boers. He was promoted to be a bombardier. He was received with every demonstration of regard by his fellow students.

Book Reviews.

A Treatise on Mental Diseases. By Henry J. Berkley, M.D., Clinical Professor of Psychiatry, Johns Hopkins University; Chief Visiting Physician to the City Insane Asylum, Baltimore. With front-piece, lithographic plates and illustrations in the text. Pp. 624. New York: D. Appleton & Company.

This work, the latest on insanity, has been designed for the use of both practitioners and students, and after careful examination we find it one which can be recommended as a text-book to the student during his collegiate course. It will also prove a present help to the busy general practitioner whose difficulties in dealing with mental cases are often extreme. As to the specialist, his library would not be complete without it. No better guide to the study of this intrinsically difficult subject has yet appeared.

The book opens with a modern presentation of the more important points in the gross anatomy and histology of the cerebrum, followed by a section dealing as lucidly as possible with the general pathology of mental maladies. Next comes that portion which will prove of most interest to the majority—a clinical section of over 500 pages.

The classification of the various forms of insanity which the writer adopts differs from that of other English authors. Whereas, the classifications of older writers have been founded either on similarity of symptoms, on causation or on mixed principles, in the work now under review an attempt has been made to form a classification on the morbid anatomical appearances. This is an

advance in the right direction, and the author has gone as far as possible in the light of present attainments. The pathological changes in the nervous system to which the many phases of insanity are due should form the basis of any scientific classification. The paucity of our knowledge of pathological facts is shown in his first group, where such prevalent forms of psychical disturbance as melancholia and mania have to be placed under the heading of "insanities without ascertainable alteration of the brain substance." The other groups, however, tend to justify the classification selected. Thus we find general paresis under "insanities consecutive to organic lesions of the cerebral substance," insanities of the puerperal period under the sub group of "insanities following bacterial and toxalbumic poisoning," and paranoia under "insanities of the psychical degenerate."

As no two books follow the same classification, it is not a drawback to the usefulness of this work if the reader is not in sympathy with the one chosen by the author. The index is complete, and the practitioner seeking a guide when necessity arises may with ease find helpful material under the various heads with which he is more familiar. Symptoms, treatment and prognosis are all dealt with in a masterly way.

While many of the chapters necessarily cover the ground common to most works of the kind, in a style that will fix attention, there is much that is new in the field of mental alienation to be found in the pages devoted to the sensile psychoses, the insanities following bacterial and toxalbumic poisoning, the febrile psychoses and those following auto-intoxication from the intestinal canal, etc. Such material must prove of great value and special interest to the physician in general practice, and seems as complete as any in the present day can be.

The work throughout convinces the reader of the practical acquaintance of the author with the subjects of which he treats, and the student can procure no more serviceable book in our language for use both before and after graduation.

The statement in the prefatory note regarding "the absence from English medical literature of a comprehensive practical work on mental diseases" we think, is at least, open to argument, but perhaps we could pardon it in a writer of United States origin if in future he would exchange for more modern English terms such rare words as "furibund," and "insults" (applied to epileptic fits), and such a combination of letters as "nascence" for one that may be found, say, in the Century dictionary. It is the great excellence of this book that prompts us to point out these occasional shortcomings, and to express the hope that in a new edition such English words as can be readily comprehended will be used throughout. When one's attention is detracted from even such good matter by unusual words it constitutes a defect in style to be regretted.

The illustrations and colored plates which are numerous in the book show careful preparation, and materially assist in elucidating the text.

The publishers are to be congratulated on the attractive appearance of the volume.

J. V. A.

Progressive Medicine for December, 1900. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Medical College Hospital, etc., etc., assisted by H. R. M. Landis, M.D., Assistant Physician to the out-patient department of the Jefferson Medical College Hospital. Lea Brothers & Co., Philadelphia and New York.

This volume is full of most interesting articles on diseases of the digestive tract and allied organs, the liver, pancreas and peritonium, genito-urinary diseases and syphilis, tractions, dislocations, amputations, surgery of the extremities and orthopedics, diseases of the kidneys, physiology, hygiene. An interesting abstract is the solution of the anæsthetic in surgery, in which some of our present ideas are somewhat ruthlessly set aside. It has always been held, and such has been our opinion, that chloroform was the safest and best for children, and ether the best in adults. Wyeth, a New York physician of large experience, says he believes ether the safest in children. For many years he used ether in all his adult operations, but at present he uses chloroform in 75 per cent. His objection to ether is the great irritation which it produces in the respiratory tract and the difficulty in a certain proportion of cases, especially in alcoholic subjects, of producing profound narcosis. Previous to his use of chloroform, he administers $\frac{1}{4}$ of a grain of morphine and the 1-50 of a grain of atropine subcutaneously. He thinks that a combination of these alkaloids stimulates the heart and allays to a considerable extent the anxiety of the patient. Their employment is based on what he believes to be a fact that chloroform is dangerous, chiefly to the heart, especially in the early stages of administration. On the other hand, we have a paper from Dr. Blake, of Boston, in which city ether is administered more than in any other city in the world. He refers in glowing terms to its safety. Much depends on its method of administration, and the gas ether apparatus of Dr. Bennet, a professional anæsthetist of New York, is highly extolled. By it the production of anesthesia was so easy, so rapid and apparently so pleasant. Altogether the volume is quite equal, and in some respects superior, to any which have preceded it.

F. W. C.

Diseases of the Nose and Throat, by E. L. Shurly, M. D., Detroit, Mich. Publishers, D. Appleton & Co., New York.

The well-known teacher who issues this work claims for it practical experience and observation, and on this basis appeals more to the general practitioner and student. As maintaining this standpoint, he has given special attention to Therapy. Operations are excluded as belonging to Surgery. Information is embodied which he has gleaned from the best authors of the day. The colored plates are artistic and excellent in detail, while the Formulæ at end of the book will greatly assist the busy practitioner.

We think the claims of the author well-sustained by his work, which is a worthy and valuable addition to any medical library. It is a clear, amply illustrated and well-arranged volume, besides being highly practical and trustworthy.

G. T. R.

Studies in the Psychology of Sex.—The Evolution of Modesty. The Phenomena of Sexual Periodicity. Auto-Erotism. By Havelock Ellis. $6\frac{3}{8} \times 8\frac{7}{8}$ inches. Pages xii-275. Extra cloth, \$2.00 nett. Sold only to Physicians and Lawyers. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

This is a work on a subject which is surrounded by difficulties in its investigation which seem unsurmountable. It is also so thoroughly scientific that the facts, which the author seems to have unearthed, have to be considered with much more than usual thoughtfulness. Still it has much in it which is of absorbing interest to the student of those peculiar instincts, which we find developed in such varying degree of intensity in our race. The present volume contains three studies. The first sketches the main outlines of a complex emotional state which is of fundamental importance in sexual psychology; the second, by bringing together evidence from widely different regions, suggests a tentative explanation of facts that are still imperfectly known; the third attempts to show that, even in fields where we assume our knowledge to be adequate, a boarder view of the phenomena teaches us to suspend judgment and to adopt a more cautious attitude. Their special use is that they bring very clearly before the reader under varying aspects a characteristic, which, though often ignored, is of the first importance in obtaining a clear understanding of the tendency of the sexual impulse to appear in a spontaneous and to some extent periodic manner, affecting women differently than men. There is much in the book which will rivet the attention of the reader, but, to clearly take in its often ultra scientific deductions, the mind requires to devote itself entirely to what is before it.

F. W. C.

Sexual Debility in Man. By Frederic R. Sturgis, M.D., formerly Clinical Professor of Venereal Diseases Medical Department University of New York. Ex-Visiting Surgeon to the City Hospital and Blackwell's Island. E. B. Treat & Co., Publishers, 241 and 243 West Twenty-third Street New York. \$3.00 nett.

The author of this work has, for many years, devoted his attention exclusively to Venereal and Genito-Urinary diseases. He has long been considered by the medical profession in this country as an authority in this specialty, and his distinguished ability has received ample recognition abroad. This work is a noteworthy one, for in it Dr. Sturgis gives the results of his extensive experience covering the observations of many years.

"The principal reason for writing this book is to introduce to the reading medical public sundry opinions the writer holds upon sexual weaknesses in men, which, although they may be at variance with ideas generally received in this country, he is convinced from experience are correct.

"Thus in the chapter on Masturbation he has combatted the old and time-honoured belief that indulgence in this habit is the necessary prelude to both physical and mental degeneration, and, while

not glossing over the dangers which may, under certain conditions, result from the habit, he has attempted to point out the folly of the hysterical denunciations which have been heaped upon it by pseudo-philanthropists and ignorant medical men. The question of castration in the case of masturbating lunatics has been brought up afresh for discussion, and the author has frankly stated his reasons for believing that, under certain circumstances, such a procedure would not only be justifiable, but proper. He has also separated Spermatorrhœa from pollutions, aiming to show that the two are absolutely distinct and separate diseases; that Spermatorrhœa is not the finale of pollutions, but is a disease *sui generis*, the symptoms, course and treatment of which are entirely different from the latter. He has also striven to correct the foolish and ridiculous idea that the man afflicted with spermatorrhœa is foredoomed to impotence and sexual uselessness.

"In the chapter on Prostatorrhœa he has attempted to lay down the natural history and symptoms of this variety of disease, and has protested against the loose and unscientific method of regarding it as practically the same as prostatitis, with which latter disease, in his opinion, it has absolutely nothing in common."

The work is a very valuable one, and should be read by every medical man. There is no class of diseases which ought to be better understood by medical men, and it is because they are not so understood that so many fall into the hands of Charlatan, who play on the fears and credulity of the unfortunate patient.

F. W. C.

A Text-Book of Histology, including Microscopic Technic. By Dr. A. A. Böhm and Dr. M. von Davidoff, of Munich, and G. Carl Huber, M.D., Junior Professor of Anatomy and Histology, University of Michigan. Authorized Translation from the Second Revised German Edition, by Herbert A. Cushing, M.D. With 351 illustrations. Price, \$3 50 *nett*. Canadian agents: J. A. Carveth & Co., Toronto; W. B. Saunders & Co., Philadelphia.

We have in Böhm and Davidoff's work one of the most thorough treatises on Histology yet published, and the translator deserves our thanks for rendering it into English.

In the preface to the English translation the editor says: "In the preparation of this American edition the editor has retained substantially all the subject matter and illustrations of the second German edition, although certain minor changes in the arrangement of the text seemed desirable." The American edition is, therefore, based on the German edition, which, by the excellence of its text and illustrations, has met the approval of teachers and students of Histology.

After an introducing chapter on microscopical technic, the cell and elementary tissues are studied in detail. Then the organs are considered and fully discussed. The sections on the motor and sensory nerve endings and on the spinal and sympathetic ganglia are particularly well treated and illustrated; and the innervation of glands and organs is ably presented. The glands with in-

ternal secretions receive the treatment which their importance demands.

The value of the work is much enhanced by technical directions. The methods described are useful and add to the value of the work as a laboratory guide.

A. B.

Essentials of Histology. By Louis Leroy, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental Departments; City Bacteriologist to Nashville, Tenn., &c. W. B. Saunders & Co. Canadian agents: J. A. Carveth & Co., Toronto. Price, \$1.00.

The essential facts of human Histology are here collected within a limited space. The subject-matter is necessarily much condensed. Nevertheless, the descriptions of the tissues and organs, though concise, are clear and accurate.

The work is adapted to the needs of medical and dental students, for whom it is avowedly written, and the questions at the end of each chapter will prove helpful to those who might wish to revise their work, after acquiring a practical knowledge of Histology in the laboratory.

A. B.

Urinary Diagnosis and Treatment —By J. W. Wainwright, M. D., Member of the American Medical Association, New York State Medical Association, New York County Medical Association, etc. Illustrated with numerous engravings and colored plates. Pages, 140. Price, \$1.00 net.

There are already so many works in urinary analysis that the author of this little book of some one hundred and fifty pages excuses its production by saying "there is at the present time none which embodies the simplest methods of chemical and microscopical examinations with the latest deductions and theories concerning the general routine treatment of the conditions found. The clinical examination of urine is of such positive necessity to the proper and intelligent understanding and definite treatment of the various conditions found, and as the methods necessary to arrive at a positive diagnosis can be simplified to such an extent that hardly any chemical knowledge is necessary, the author gives the easiest methods of examination. He also elucidates very clearly the latest theories, and points out the up to-date treatment required on each condition. The sixteen plates at the end of the work are beautifully engraved and some colored, and add greatly to its value.

F. W. C.

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THE GENITO-URINARY CONDITIONS WE FIND IN THE WEAK NERVOUS TYPES MET BY SANMETTO.

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LITERARY NOTES.

The leading feature of *The Living Age* for April 6—the day before Easter—will be a striking and touching Easter story, "One of These Little Ones," by Princess Volkonski, translated from the Russian.

Mr. John Foster Fraser's description of "The New House of Commons," in *The Living Age* for March 16, is particularly graphic and timely.

"The Apotheosis of Anne," in *The Living Age* for March 16 and 23, is one of the cleverest short stories in recent magazine literature.

The Quarterly Review's account of "The Victorian Stage," which *The Living Age* reproduces in its number for March 16, is eminently sane and sensible, and bright withal.

The Chinese question is treated briefly, from the Chinese point of view, by Taw Sein Ko, in the leading article in *The Living Age* for March 30.

The Living Age for March 30 contains another of Mr. Tallentyre's delightful articles on Women of the Salons. The subject is Madame de Stael.

Mr. Meredith Townsend, whose article on "The Influence of Europe on Asia," is published in *The Living Age* for March 23, reaches the conclusion that Europe never has exerted any influence on Asia worth mentioning, and is not likely to.