

area of dullness. Several other cases of fracture gave similar results. In another case, in which, after injury to the right occipital bone, there was paralysis of the right arm and hand and loss of speech, there was marked decrease of resonance over the left parietal bone, and there was an improvement in the symptoms coincident with a return of the resonance over the left motor area.

7. The localisation of cerebral tumours.

Bruns (*Wien. klin. Rundschau*, 1897, No. 46) points out the difficulties of diagnosis of cerebral tumours, and gives some supplementary means of diagnosis. Thus disturbances of equilibrium characterise tumours both of the frontal lobe and cerebellum, often causing confusion in localisation. In most cases, however, careful examination of the general and local symptoms will establish a diagnosis, these being often markedly different. Homonymous hemianopsia is of little value in the topical diagnosis of tumours; if, however, right homonymous hemianopsia is from the beginning associated with alexia and word blindness, a tumour in the white matter of the left occipital lobe can be inferred. The localising symptoms of tumours in the neighbourhood of the central convolutions, particularly in the frontal and parietal lobes, are often difficult to diagnose from those of the motor area itself. In such cases Bruns especially recommends the method of percussion of the skull, which greatly facilitates local diagnosis when the conjectured seat of the brain lesion agrees with the evidence derived from percussion. Markedly localised tenderness and tympanic note are scarcely possible, except when the tumour is at least in the neighbourhood of the cortex.

DISEASES OF THE STOMACH, INTESTINES, AND LIVER.

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The present direction of the advance in treatment.

The year 1898 has not been marked by any great innovation in the treatment of disease of stomach, intestine, or liver. Worthy of record, however, is the complete and successful removal of the stomach by Schlatter (*Correspondenzblatt für Schw. Aerzte*, Dec., 1897), a case which, apart from its startling novelty, has furnished some information as to the process of digestion. The operation was undertaken on account of a malignant growth, which had invaded so large a part of the wall of the stomach that gastro-enterostomy was out of the question. The œsophagus was connected to the jejunum by interrupted silk sutures in the mucosa and Lembert sutures in the peritoneal coat. The patient, a woman aged fifty-six, was fed at first by the rectum, but, as the enemata were not retained, mouth-feeding was begun on the second day. At the end of the third week she ate half a chicken. In the first two months she gained about 9 lb. in weight, and four months later she was found to be 20 lb. the heavier. Hoffman (*Münchener med. Wochenschr.*, 1898, May 3) reports some interesting observations on the metabolism of the patient. He shows that a nitrogenous balance can be established without the aid of the stomach, that fats are disposed of, that no intestinal putrefaction occurs (though gastric juice is absent), and that the usual decrease in the chlorides of the urine after a large meal no longer occurs. Schlatter is inclined to minimise the importance of gastric as compared with intestinal digestion, and thinks that one of the chief functions of the stomach is that of a reservoir, which prevents the intestines from being overloaded. At any rate, it is now clear that intestinal digestion is by itself sufficient for the maintenance of nutrition.

Though no great advance in treatment can be recorded apart from this noteworthy example of modern surgery, there are certain subjects which occupy a prominent position in the

literature of the year. In the first place much has been written about the large group of inflammatory conditions of the colon. They are exceedingly common, but our knowledge of the various causes on which they depend is so scanty that treatment at present remains purely empirical. Closely connected with this is the subject of intestinal disinfection. The question of the common so-called functional disorders of the stomach also comes to the front. These three matters are of great importance in every-day practice. They cause a vast amount of ill-health and suffering, and any approach to a rational method of treatment will be welcome.

As regards the liver nothing in the way of therapeutic improvement has been recorded in 1898. Adami (*Lancet*, Aug. 13, 1898) describes the association of a peculiar micro-organism with cirrhosis of the liver. In at least a very large number of well-marked cases of progressive cirrhosis in man he finds in the liver-cells, and also in the lymph-spaces in the new connective tissue, a very minute micro-organism, appearing as a diplococcus or as an ovoid bacterium. This is very similar to the organism found in the cirrhotic livers of cattle in "Pictou" disease occurring in Nova Scotia. No estimation of the importance of this discovery can yet be made, and it cannot yet give origin to any alteration in our treatment of the disease.

Inflammation of the colon and its treatment.

The term "colitis" is used in medical literature with increasing frequency. It is made to include a large range of cases, varying from a diarrhoea of a few days' duration to a rapidly fatal attack associated with necrosis of the bowel-wall. Any attempt to lay down rules of treatment for this condition must be based on some classification of the different forms which occur, and no permanent classification can as yet be made.

Delafield (*American Journal of the Medical Sciences*, Oct., 1897) describes the different forms of colitis which he has observed in the city of New York and its suburbs. The general truth of the picture can be recognised, but it is admittedly only a record of one man's experience. The article contains an outline of the treatment which he employs. Among others he describes three important forms:—

(1) Acute catarrhal colitis, the most common kind, characterised (*a*) by increased production of mucus or (*b*) by an exudation of serum without structural alteration in the wall of the colon. As regards the "mucous" form, if the lower end of the colon only is affected, there is pain in the rectum with irritability and the frequent passage of small quantities of blood

and mucus with little faecal matter. There is moderate pyrexia, and the patient is usually well within a week. If, however, a large part of the colon is affected, the patient is more seriously ill, and young children often die. In the treatment of such cases he employs rest in bed, a fluid diet, castor oil or sulphate of magnesia, and then combinations of bismuth and opium. An alternative plan is to irrigate the rectum every day with one or two quarts of infusion of flaxseed and give no medicine. This form is apt to be followed by a chronic condition, which may last for years, and two types of chronic case are to be recognised. In the first type the disease is limited to the rectum. It is attended with gradual thickening of glandular, connective, and muscular coats, and is characterised by frequent small passages of mucus and blood with loss of flesh and strength. The condition is very intractable and many patients do not get well, in spite of local applications to the rectum and residence in a dry inland climate. In the second type of chronic case any part or the whole of the colon is affected. Mucus is passed in varying quantity and at varying intervals, while the stools are sometimes formed and sometimes fluid. There is more or less abdominal pain with loss of nutrition, and many patients become hypochondriacs. Treatment should be directed quite as much to the general health and surroundings as to the bowel. The "serous" form of catarrhal colitis which is characterised by serous exudation is well defined. The patient has at first a feeling of discomfort in the abdomen or colicky pain, a moderate amount of prostration and sometimes nausea. Then comes the feeling of necessity for emptying the bowels, and a large quantity of fluid is discharged without any effort of expulsion. The fluid consists of fluid faeces, serum, and mucus. It sometimes amounts to two quarts. There are a number of such discharges daily. The patient is weak and miserable, but not necessarily confined to bed. Such an attack may last for a few days only, or it may continue for weeks or months. It may recur year after year, especially in the summer. He finds that it is very intractable, but he recommends as the best plan of treatment, a milk diet, except for one solid meal a day, a quarter of a grain of codeia after each action of the bowels, and 5 minims of castor oil with 5 grains of salol to be taken together four times a day.

(2) Acute, productive, and necrotic colitis, involving the glandular coat usually of the upper part of the colon. The mucosa shows the appearance of an acute catarrhal inflammation, but there are also numerous small superficial ulcers. The symptoms resemble those of the catarrhal form or of amœbic

colitis. Some cases are fatal, some run on for months, and some favourable cases cease in three or four weeks. Treatment must be applied in an early stage if it is to be efficient. The patient should be put to bed and the diet should consist mainly of milk at first, but chronic cases should get out of doors, and do best in dry, elevated, inland climates. In an early stage always, and occasionally in chronic cases, irrigation of the bowel is useful. He has obtained the best results with a combination of opium, salol, and castor oil.

(3) Croupous or diphtheritic colitis, a very severe lesion belonging to autumn months. There is nearly constant rectal pain, irritability and tenesmus; occasionally also colicky pains and strangury. There are numerous small painful passages of blood and mucus, and if a large extent of bowel is affected, large quantities of brownish fluid are passed. The main general symptoms are extreme prostration with rapid feeble heart, often passing into delirium and stupor. There is usually pyrexia, except in very severe cases. It is often fatal. Bed and a fluid diet with the use of opium and alcohol are essential. He recommends irrigation with at least two quarts of solution of corrosive sublimate (1-10,000), and if a large part of the bowel is affected he gives also ipecac. gr. 20 once or twice a day, with salol gr. 5 every hour. Chloride of zinc or formalin are alternative solutions for injection.

In connection with this subject, it may be worth while to call attention to the frequent association of some form of colitis with a catarrhal appendicitis, and to the difficulty of treatment. Treves (Allbutt's "System of Medicine," vol. iii., p. 923) notes that colitis may present some resemblance to perityphlitis, especially when the cæcum and ascending colon are conspicuously affected. There can be little doubt that the two conditions not uncommonly occur together. A young patient will give a history of many slight attacks of abdominal pain, each occurring with no apparent exciting cause, and lasting perhaps for a week. If these attacks have been observed, it will have been found that the onset is rather gradual, developing in the course of twenty-four hours, and usually attended with slight pyrexia and occasionally vomiting. The tongue becomes furred, and the bowels are either confined or one or two loose offensive stools are passed. Further, on examination, it may be found that in one or more of these attacks there is pain, tenderness, definite resistance, and even a defined inflammatory mass in the right iliac fossa, while in other attacks which have the same general symptoms the pain and tenderness are more diffused, and may be present at any part of the course of the colon,

even over the sigmoid flexure, while the right iliac fossa is free. Such patients seldom acquire the habit of a regular daily action of the bowels: the stools are often offensive and loose, or they contain mucus. The sufferers are usually of the neurotic type, and can quickly become hypochondriacs. It is an open question whether such cases should be treated by general measures, relating to diet, residence, and habits, coupled with the administration of such drugs as salol and salicylate of bismuth, or whether the appendix should be excised in an interval of comparatively good health. Although the removal of a catarrhal appendix can presumably have but little effect on the general condition of the colon, yet there is evidence to show that, when the symptoms of catarrhal colitis are conjoined with those of a similar condition of the appendix, excision may be followed by considerable improvement.

Mucous colitis.

This form of disorder of the colon is very common in private practice. Our clinical knowledge of it has increased greatly in the last few years, so that a description of its symptoms can now be written with probable accuracy, and it is easily recognised (Cf. Hale White, Allbutt's "System of Medicine," vol. iii., where it is termed "membranous colitis"). As to its causation and pathology we know little or nothing, and it is very rarely fatal. Mathieu (*Revue de Thérap.*, 1897, No. 14) writes about its relations, and describes the treatment which he employs. He notes the well-known fact of its occurrence more particularly in neurotic individuals. He finds, also, that it is especially common in persons suffering from uterine or pelvic trouble. He characterises the condition as an irritation of the colon, which results sometimes in an over-secretion of mucus, and sometimes in the development of hyperæsthesia and spasmodic contraction of parts of the bowel. This, though it is pure guess-work, at any rate comprises the main symptoms, viz.: the excessive production of mucus, the constipation, and the capricious pains in different parts of the abdomen. As regards the constipation, he agrees with all writers that no drastic purgative is permissible. He recommends castor oil (30 to 60 minims) in capsules, ten minutes before breakfast on alternate days, if necessary. Liquid extract of cascara sagrada with magnesia and bicarbonate of soda, may also be used. Further, he is in favour of large irrigations of the bowel, with the idea of reducing the irritation of the part, and also of producing a disinfectant action. He irrigates with two quarts of marsh-mallow decoction at a temperature of 104° F., the irrigator being at a height of one or two feet. If much mucus or so-called "membrane" is appearing at the time, he adds a drachm of sodium

biborate or 15 gr. of sodium salicylate. Either hot or cold applications to the abdomen every morning he thinks are of use. When the pain is severe, occurring as it does sometimes in regular intestinal crises, he recommends belladonna, one-sixth of a grain in the form of a pill. The diet should be plain but varied. It need not necessarily consist only of milk, but it should be unirritating, and it should leave as little indigestible residue as possible. In case of great wasting, a diet of raw meat may be used with advantage. Finally he lays stress on the general surroundings of the patient. And there can be no doubt that great help towards a cure is afforded by a healthy outdoor life, with abundance of outside interests and cheerfulness, and with avoidance of all opportunity for brooding and morbid introspection.

Disinfection of the bowel.

The conditions of the bowel which demand some attempt at disinfection are very numerous, but we are still in the dark as to the best drug to be used for the purpose. Something can doubtless be done in this direction, but it is probable that so-called disinfection of the bowel can at the best amount to no more than the exercise of some degree of control over a superabundant and unnatural growth of the micro-organisms of putrefaction which are naturally and perhaps usefully present. **Lieut.-Col. Quill, R.A.M.C.** (*Brit. Med. Journ.*, May 14, 1898), gives an account of the practice which his experience of enteric fever in India has led him to adopt.

The cases reported are not very numerous, but his mortality is no more than 4.3 per cent. Apart from the care taken to suit the diet in amount to the capacity of the patient and the exactness of the nursing directions, his main point is the administration of a disinfectant mixture at frequent intervals. His prescription is as follows:—Ac. carbol. purissimi (Calvert's No. 1) ℥ 36, tinct. chlorof. co. ℥ij, tinct. card. co. ℥ij, syrup. aurant. ℥j, aq. chlorof. ad ℥xij.

Of this mixture he gives one ounce, with an equal quantity of iced water, every second or third hour immediately after food. In mild cases five or six doses are given in the twenty-four hours, while in severe cases ten such doses are used. The mixture is palatable and efficient. The author has never observed any harm from its use, and no patient has made any objection to taking it. The stools under its use almost invariably lose their unpleasant odour, and are maintained in that condition if the treatment be persisted in. One of his patients took from first to last over two ounces of carbolic acid with an equal quantity of chloroform, yet there was no obvious appearance of the drug in the urine.

The author has also used eucalyptus oil with apparently good results. Many people, however, have a decided objection to its flavour. He makes the following mixture:—Ol. eucalypti ℥j, mucil. acac. ℥j, spt. ammon. arom. ℥ss, glycerine ℥ij, spt. chlorof. ℥ij, aq. chlorof. ad ℥xij. Of this he gives an ounce every third or fourth hour.

Similar testimony is afforded to carbolic acid by **Capt. Thacker, R.A.M.C.** (*Brit. Med. Journ.*, Sept. 24, 1898). He used much the same mixture in 79 cases of enteric fever, the mortality being at the rate of 13.9 per cent. It was administered fresh from an ice-box. "Without any exception it was well tolerated by the stomach, caused no unpleasant symptoms, and was thoroughly liked by the patients as a palatable medicine." He attributes to its use the following favourable signs:—Rapid cleansing of the tongue, lowering of the temperature with a well-marked morning remission in many cases, marked improvement in the unpleasant odour of the stools, which in a few days become practically deodorised, control of tympanites, diarrhoea, and delirium, favourable convalescence with sound recovery.

A discussion on auto-intoxication and disinfection of the bowel took place at the Medical Congress at Wiesbaden (*Münchener med. Wochenschr.*, 1898, No. 17). It showed, on the one hand, how little positive knowledge we have as to the possibility of self-poisoning by substances generated in the bowel, and, on the other hand, how great is the difference of opinion on the question of combating such a condition by bactericidal drugs. Many speakers brought forward instances of ill-defined disease, which they interpreted on the theory of auto-intoxication, and everyone has seen cases of a similar kind. **Müller** spoke favourably of energetic emptying of the alimentary canal by washing out the stomach and administering purgatives, with a change of diet. Calomel he considered rather as a purgative than as an antiseptic. **Quincke** recommended the internal administration of yeast, up to 150 c.c. in amount. **Stern**, on the other hand, spoke rather enthusiastically of calomel. **Strauss** stated that by investigation of the influence of various antiseptics on fermentation processes in stools, the following order of value was established:—In the first place, chinol, thymol, actol; in the second place, bismuth, β -naphthol, menthol, bismuth salicylate, and resorcin.

Treatment of hyperacidity.

A paper by **Joslin** (*Boston Med. and Surg. Journ.*, April 28, 1898) presents us with a very clear and scientific exposition of the current views as to this common malady. It is certainly common enough in Britain, but it may be that it is still more

common in America, where among certain classes of hardly-pressed busy men irregularities in the hygiene of eating are the rule rather than the exception. Hyperacidity of the stomach is a symptom, not a disease. But our knowledge of the conditions which give rise to it is so scanty, and the symptom is in itself so marked, that at the present time our treatment is almost entirely directed to its immediate relief.

The diagnosis is not difficult. Speaking here only of that form, which is by far the most common, consisting of an excessive secretion of hydrochloric acid (often called hyperchlorhydria), it is found to occur more particularly in neurotic individuals, often in association with definite manifestations of neurasthenia. It is common in men whose occupation leads to haste and worry, and irregular habits as regards rest and meals. It may, however, be met with in the apparently healthy and leisured class, but the individual so affected is usually of a highly neurotic temperament. Joslin points out its frequent association with migraine, a functional nervous derangement with which it has much in common. It may perhaps arise in some cases from the excessive use of such gastric stimulants as spices, pepper, salt, mustard; but there is considerable room for doubt on this point, and it is noteworthy that hyperacidity is not a common result of the abuse of alcohol. As regards gross organic disease, as associated with hyperacidity, ulcer of the stomach comes first in order of frequency. It is uncertain here whether the ulcer is cause or effect. Joslin takes the view that the excessive secretion of acid follows the irritation of nerves exposed in the floor of the ulcer. A very important association is that of tabes, in which hyperacidity is common. Moreover, the differential diagnosis between a gastric crisis and a certain severely painful type of hyperacidity, probably attended with pyloric spasm, is often difficult and at times impossible.

Further, it is pointed out that we can safely make these two postulates:—(1) In the overwhelming majority of cases of hyperacidity we have an atonic or dilated stomach, such as can usually be recognised by physical signs; (2) hyperacidity can cause a stenosis of the pylorus through a spasm of its muscles, and so lead to dilatation of the stomach and stasis. "But whether the dilated stomach appears first, and through its stagnant contents leads to stimulation of the mucosa and increases the amount of hydrochloric acid, or whether the increased acid is the primary factor, and through the pyloric spasm so-caused dilatation arises, it is very hard to decide." Joslin takes the former view, on the ground that if the dilatation is removed by medicinal or surgical treatment the hyperacidity disappears.

Finally, the picture of the condition is not difficult to recognise. The main complaint is pain, usually dull and heavy, in the epigastrium or in the neighbourhood of the pylorus. The pain begins only when digestion is in full swing, seldom, that is, during the first hour after a meal. It is apt to increase from this time up to the next meal, whereby it is generally relieved. In some cases the patient, before he comes under observation, has discovered for himself that the pain is relieved by food, and sometimes he has acquired the habit of taking bicarbonate of soda for the same purpose. The appetite is good. Vomiting is rare, except in cases where there is some underlying condition, such as ulcer or great dilatation. Wind is frequently brought up. Thirst is present in the severe, but absent in the mild cases. While this description covers the usual type of case, it must be remembered that sometimes the pain is exceedingly severe—so severe, in fact, that, by overshadowing the other symptoms, it may lead to a mistake in diagnosis. As Joslin states, it has happened that in some cases morphia alone can give relief, and that by its injudicious use the patient has been allowed to acquire a morphia-habit. At times the pain may extend even up to the shoulders like the pain of gall-stones. It may be so low down as to simulate appendicitis. As has been already stated, it may closely resemble the gastric crisis of tabes. I have on two occasions known the pain to occur in great severity under the left costal margin, so as to arouse at first some suspicion of angina pectoris. From the character and severity of the pain in such cases as these, it is difficult to attribute it to anything else than the spasm of some part of the muscular wall of the stomach; most probably in the neighbourhood of the pylorus.

Though hyperacidity is commonly easy of recognition from the patient's description of his symptoms, actual examination of the contents of the stomach should always be practised as far as possible. "The knowledge derived from such examination imparts confidence to the physician and the patient." The usual test-meal consists of $2\frac{1}{2}$ oz. of white bread, and 10 fluid oz. of weak tea given in the morning on an empty stomach, and the contents are removed after the lapse of an hour. Joslin recommends the quantitative test of Mintz (Allbutt's "System of Medicine," vol. iii., p. 290).

As regards treatment, Joslin deals first with measures which aim at strengthening the motor power of the stomach. He advocates rowing and golf. Massage may be of value at the hands of a skilful operator. Electricity he has discarded as useless. He is impressed with the value of nux vomica, which he administers

thus: 10 drops of the tincture three times a day, the dose being increased daily by 1 drop until 20 or 30 drops are being taken thrice a day. When great and obstinate dilatation is met with, the stomach-tube must be used, though it should be avoided when possible. Failing relief, he advocates resort to surgery in accordance with the recommendations of Leube and Mikulicz. Thirst is best relieved by enemata of normal salt solution, and the patient should not be allowed to take large quantities of fluid by the mouth.

As regards the hyperacid condition itself, some simple methods of treatment were described in the "Year-Book of Treatment for 1898," p. 103. Joslin recommends that food should be given in small bulk, and the pain may be relieved by malted milk tablets, which, in addition to some neutralising power, give rise, like Bergmann's tabloids ("Year-Book of Treatment, 1898," p. 104) to an increase in flow of alkaline saliva. The alkalies proper, though temporarily of great use, he thinks lose their power later.

If they are used he recommends large doses of them combined with bismuth.

As to food, the results of experimental observation and clinical experience are not in agreement in regard to the choice of an albuminous or a carbohydrate diet. He is himself inclined to favour the former, and this view will be generally accepted at the present moment. At the same time there is much still to be learnt on this point of diet. Theoretically and experimentally, an albuminous diet should prove irritating, and should tend to aggravate the condition, nitrogenous food being a stimulant to the secretion of acid. Hence some have been led to prescribe a diet rich in carbohydrates. On the other hand, practical experience indicates that a carbohydrate diet does not produce good results, and that a diet mainly nitrogenous coincides with relief to the patient. Strauss and Aldor (*Zeitschr. f. diät. und phys. Therapie*, Bd. 1, Heft. 2, p. 117) report some experimental work, as a result of which they maintain that the diet should be partly nitrogenous, but that carbohydrates should be reduced, while a considerable amount of fat is introduced. They show that in most cases the addition of oil to the diet is followed by a diminution in the free hydrochloric acid. They show that under such a diet the patient's weight may remain constant or even increase, which is an important point when we remember how imperfect is nutrition in these cases of hyperacidity. The fat used by them was obtained from milk, butter, cream, and oil. They recommend cream more particularly, and their suggestions are well worthy of extended trial.

At the Medical Congress in Berlin in 1893, Fleiner published his method of treating hyperchlorhydria (whether associated or not with gastric ulcer) by means of heroic doses of subnitrate of bismuth, administered through a tube. In three cases of ulcer near the pylorus, with pyloric stenosis and dilatation of the stomach, he thus reduced the hydrochloric acid from 4.0 to 1.0 per cent., from 3.0 to .98 per cent., and from 2.9 per cent. to normal. This method has not met with general acceptance, and is open to criticism, especially as regards the passage of a tube. Olivetti (*Therap. Monatsb.*, April, 1898) has recently tried it in four cases. He administered the bismuth suspended in water through a tube, in the morning when the stomach is presumably empty. The dose varied between 10 and 20 grm., and each patient received during the period of treatment a total amount varying from 275 to 320 grm., roughly from 9 to 10 oz. He estimated the amount of acid before treatment, and three times during the treatment. In two of the cases the hyperacidity was associated with gastric ulcer and hæmorrhage, in the other two it was uncomplicated. The actual results are given in figures, and are interesting. He concludes that by this method there is produced marked improvement as regards pain and subjective symptoms, and that this improvement lasts for some time afterwards. It is not, however, permanent, though it lasts longer in the case of ulcer than when the hyperchlorhydria is uncomplicated. He considers that a daily dose of from 10 to 15 grm. is best calculated to produce this effect. He finds that bismuth as thus administered has no pronounced influence either on the amount of gastric juice or on the motility of the stomach, and that the diminution in the amount of hydrochloric acid which is produced is so slight that the improvement in such symptoms as heartburn, pain, and vomiting, in the case of gastric ulcer, cannot be attributed to it. He is inclined, therefore, to fall back on the old hypothesis that the value of bismuth in the treatment of gastric ulcer, which is universally admitted, lies in the mechanical protection afforded to certain hyperalgetic spots in the mucous membrane, rather than in any influence exercised upon gastric secretion.

In connection with this subject, we may learn from Fleiner's method of treatment that bismuth subnitrate, an undoubtedly valuable drug in many conditions, may be used safely in far larger doses than the British Pharmacopœia indicates. There are many cases where good results will be obtained by a dose of 30 gr., and even 50 or 60 gr. are easily and safely administered in suspension.

Hæmatemesis.

In a clinical lecture Robin of Paris (reported in *Med. Press and Circular*, Dec. 22, 1897) details the treatment which he recommends on being summoned to a patient who is vomiting blood in large quantity, whether as the result of a gastric ulcer or of other causation. The patient should be put to bed at once with his head low, lying on his back; ergotine should be injected hypodermically over the epigastrium, and ice applied to the same region. One or two grains of extract of opium should be given at once, and then every two hours one tablespoonful of the following mixture:—Ext. ergotæ liq., 3 dr.; ac. gallici, 30 gr.; ext. opii liq., 40 minims; syrup. terebinth., $\frac{1}{2}$ oz.; aq. flor. aurant., ad 6 oz. This mixture should be continued until the hæmorrhage has entirely ceased. If syncope occurs, he has recourse to injections of ether, mustard plasters to the legs, amyl nitrite, and transfusion. If obstinate vomiting continues, which may tend to keep up or increase the hæmorrhage, he recommends from 8 to 10 drops of the following mixture in a little water:—Picrotoxin and morph. hydrochlor., of each 1 gr.; atropin. sulphatis, 1 gr.; ergotin, 15 gr.; aq. dest., 4 dr.; and spt. vini rect., sufficient to make solution. He further points out that the blood which has been shed, but is not vomited, is apt to undergo decomposition in stomach or bowel, especially if the patient is constipated. An auto-intoxication may thereby be set up, and, as is often observed, the tongue becomes furred and the breath offensive. This condition may be dealt with by cleaning out the bowels by enemata (glycerine or a tablespoonful of sodium hypochlorite) and by purgatives. The debility and anæmia which remain require iron, inasmuch as a generous diet can hardly be allowed so soon after severe hæmatemesis. Robin prefers the perchloride of iron, as being both hæmostatic and tonic.

The use of calcium chloride to arrest hæmorrhage, internal or external, has often been urged by Prof. Wright, of Netley. Parry (*Lancet*, July 16, 1898) describes a case of gastro-intestinal hæmorrhage in a newly-born child, an event of obscure pathology which is commonly fatal. On the second day of the bleeding eight doses of 5 gr. of calcium chloride were administered, the same amount was given on the third day, and during the fourth day it was given every two hours. Altogether the child took 160 gr. in three days. The hæmorrhage began to lessen twenty-four hours after its exhibition, and ceased completely in forty-eight hours, the child recovering. If it is to be of any use, the drug must be given freely, and it is clear from this case that it has no harmful effects.

Artificial food preparations.

Some account of "eucasin" was given in the "Year-Book of Treatment, 1898," p. 102. Weiss (*Therap. Wochenschr.*, 1897, No. 51) writes in praise of this food. It contains 95 per cent. of albumin, it is very easily absorbed, and it can be given with advantage by the rectum. Further, it contains no nuclein, and so does not increase the production of uric acid.

Yet another preparation has seen the light in 1898. "Tropon" is reported on by Finkler (*Deutsch. med. Wochenschr.*, 1898, No. 17), and Strauss (*Therap. Monatsh.*, May, 1898) has examined it carefully. It is made from animal albumen of various origins and from vegetable albumen (cereal and leguminous). It is a finely-powdered greyish-brown substance, insoluble in water, almost devoid of smell and taste. It is easily digested in artificial and natural gastric juice. Its analysis shows 90-97 per cent. of albumen, 0.5 to 1.0 per cent. of ash, and traces of athereal extractives. It has the advantage of being exceedingly cheap. Owing to its consisting of a fine powder, it is found to be particularly useful in stricture of the œsophagus, and experience shows that it has no irritant effect on stomach or bowel. It may be given in warm milk, a teaspoonful in a pint of milk, or in soup or chocolate or cocoa. Twenty to sixty grammes may be given per diem.

Treatment of ascites by oxygen.

In the "Year-Book of Treatment for 1898," p. 95, some account of the current treatment of peritoneal tuberculosis was given. In France trial has been made of the injection of sterilised air into the peritoneal cavity. Evidence is given by Maignot (*Thèse de Lyon*, 1898) to show that it is better to use oxygen rather than air in the treatment of ascites by this method of intraperitoneal gaseous injection. He believes, in fact, that when air is used it is the oxygen which has effect by reason of the irritation set up; and, further, that this method of treatment is of use when the ascites is due to cirrhosis, as well as in cases of peritoneal tuberculosis. The injection of large volumes of gas up to 5 or 6 litres is followed by abdominal pain, and experience points to 1 or 2 litres as being a suitable amount. The gas must, of course, be sterilised. Its injection is followed by slight abdominal pain and slight rise of temperature, but both these results disappear in a day or so. The period in which the injected gas can be absorbed varies in different cases, but the mixture of gas and fluid in the abdomen can be detected with the hand for eight, ten, or even fifteen days after injection.

Treatment of dysentery.

This subject was under discussion at the meeting of the British Medical Association in 1898, and considerable difference of opinion was elicited. The different results obtained may plausibly be explained on the hypothesis that there are many different forms of the disease, and, as Major Davidson, R.A.M.C., suggested, it is likewise probable that in the worst forms the action of septic organisms is superadded to that of the specific virus, a process which we know occurs in tuberculous disease of the lung.

Sandwith (*Brit. Med. Journal*, Sept. 24, 1898), as the result of experience at Cairo, is inclined to discard the use of ipecacuanha, even when used in the de-emetinised form. He prefers to use magnesium sulphate in doses of 1 dr. every hour until the bowels are well emptied. Latterly he has trusted largely to enemata, especially containing sulphate of copper, and he uses these even in acute cases.

Major Davidson, on the other hand, is of opinion that ipecacuanha is useful in checking the disease in its early stage by causing exudation from the mucous membrane, and thus allaying tension and inflammation. Lt.-Col. Crombie also believes that ipecacuanha is of great service in true acute dysentery. He gives it in large doses, having previously administered chloral.

Captain Johnston (*Brit. Med. Journal*, April 16, 1898) testifies, on the other hand, from his Indian experience, that ipecacuanha has not the effect with which it was formerly credited. He, like many others, strongly recommends magnesium sulphate. He says that patients may come in passing fifteen stools a day containing blood and slime, and under this treatment, even on field service, the average duration of the attack is only two or three days. The patient is at once put on a purely milk diet, and is given 2 dr. of magnesium sulphate every four hours, combined with aromatic sulphuric acid, 5 minims (to counteract any severe griping that may be caused), till the flow of bile is well established, as seen in the stools.

In Great Britain, however, where chronic dysentery alone comes under observation, the general consensus of opinion points to absolute rest, a milk diet, and treatment by large, slow irrigation with boracic, quinine, or silver nitrate solutions, with or without the internal administration of bismuth salicylate, and salol.

Attention was drawn in the "Year-Book of Treatment for 1898" (p. 99) to the use of Monsonia in dysentery, recommended by Maberley. Further information is supplied by him (*Lancet*,

July 16, 1898), and he has sent specimens of Monsonia and some unnamed species of Pelargonium from South Africa to London for the preparation of tinctures. The latter, he thinks, are more suitable than Monsonia for ulceration of the stomach and upper part of the intestinal tract, and he quotes a case illustrating the use of the drug.

Acute intussusception in young children.

There is a growing tendency to give up all the so-called medical means of dealing with intussusception and to hand such cases over to the surgeon at the earliest opportunity. Many cases recover no doubt, by means of inflation or injection, but it is equally true that many lives are lost by depending too much on such means and by delaying operation. Under certain conditions, especially in country practice, the milder measures only may perhaps be applicable, but where both medical and surgical aid is available, as in hospitals, it is probable that the best results are obtained if inflation or injection be tried by a surgeon who is prepared to operate at once, if they fail. Packard (*Therapeutic Gazette*, March 15, 1898) has written an article in this sense, founded on a case under his care which impressed him with the danger of what he calls "non-operative mechanical interference." Reduction by inflation or injection would have been impossible in this case, not only because of the adhesions between the serous layers, but also by reason of the presence of an enlarged mesenteric gland which interfered with the return of the invagination. At the same time reduction, if it had been possible, could not have saved life, owing to the presence of deep ulceration in the ascending colon. His experience is to the effect that all mechanical attempts at reduction should be performed with the greatest care and gentleness, that they should be employed at as early a time as possible, and that after the third day they promise but little success, and are capable of doing great damage. Further discussing the method of attempting reduction without operation, he decides in favour of injection of fluid rather than inflation, for the obvious reason that in the former alone can the force used be estimated. He recommends normal salt solution for use, as not being irritating and as causing no disturbance by osmosis, and he is inclined to use it at a temperature of 100° to 105° F., and to use it by an irrigator rather than by any form of syringe. The height above the rectum at which the irrigator can be safely held has formed the subject of many experiments. It has been found that a pressure of two and a half pounds on the square inch (irrigator at five feet elevation) could cause cracking of the peritoneum, and that an elevation of six feet may produce complete rupture of the bowel. Rupture has, however, occurred

with the irrigator raised only four feet above the bowel, and it is probable that three feet is very near the limit of safety.

D'Arcy Power ("Some Points in the Anatomy, Pathology, and Surgery of Intussusception," 1898) recommends that in all cases of the common form of intussusception the routine treatment should be to irrigate the colon with salt solution at 100° F. under a pressure of not more than three feet of water, the liquid being allowed to act for at least ten minutes, while the patient is under chloroform. When this fails, the surgeon must at once proceed to open the abdomen. Similarly laparotomy is necessary, when, as sometimes happens, the invagination can be reduced by injection, but quickly returns. He does not consider that inversion of the patient renders irrigation more successful, and he is satisfied that long-continued distension under a low pressure is of more avail than rapid dilatation under a high pressure. The surgeon should keep one hand flat upon the abdomen whilst irrigation is being performed, and he must carefully avoid great variations of pressure. A sudden and uniform enlargement of the whole abdomen during irrigation raises the suspicion that rupture of the bowel has occurred, and the abdomen should in any case at once be opened. The length of the intussusception is no bar to its reduction by irrigation, and success may be obtained even when the ilio-cæcal valve is beyond the anus.

He shows further that the capacity of the colon is very variable. In a child of five months it was distended with ten ounces, while in a child two months older thirty ounces were required.

DISEASES OF THE KIDNEYS, DIABETES, ETC.

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A good deal of work has been done during 1898 on urinary pathology and treatment. At the Edinburgh meeting of the British Medical Association an important discussion (an abstract of which is given) took place in the Pharmaceutical Section, on the treatment of chronic renal disease. The general tendency of the discussion was to deprecate efforts to cure the disease by means of drugs, but to enhance the value of general hygiene and diet in preventing the progress of the disease. Professor Ewald, of Berlin, described his method of drawing effusions from the limbs and cavities, and advocated more frequent tapping. Papers on nephritis are fairly numerous. Senator discusses the pathogenesis of chronic nephritis, while Bradford describes what he considers as a new form of Bright's disease occurring in young women. Considerable attention has been paid by the French school of physicians to the question of "renal permeability," as shown by the subcutaneous injection of aniline colours.

Pavy, in the supplementary Croonian Lecture, restates and expands his views on the pathology and treatment of diabetes. However much some physiologists may disagree with Pavy, still any statement or theory coming from one of so wide and varied an experience of diabetes, must be received with attention and interest by physicians. A considerable number of drugs have been used in diabetes by different observers, and their results are recorded. Abstracts of a number of articles on different urinary questions are given.

I.—NEPHRITIS AND ALBUMINURIA.

1. Discussion on the treatment of chronic renal disease.—Sixty-sixth annual meeting of the British Medical Association, Edinburgh, July, 1898.

The discussion was opened by Dr. Nestor Tirard, London, who took two types of chronic renal disease—renal cirrhosis and chronic nephritis, two conditions which provided ample field for the dis-