AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(211) Perforation in Typhoid Fever.

J. ALISON SCOTT (*University of Pennsylvania Medical Bulletin*, May, 1905) has studied 50 cases of enteric fever in which either operation or autopsy verified the presence of a perforation (including 1 case of ruptured mesenteric gland and 4 of perforated typhoid ulcer of the appendix). According to his figures, as well as those of other American, English, and Colonial writers, one out of every three fatalities in enteric fever is due to perforation. Most of the patients were young males; a large proportion of the perforations occurred in the second and third weeks of the illness, which was more often than not a severe attack. The hole was usually small, single, and situated in the ileum, especially in the last 12 in. The commonest micro-organism in the peritoneal exudates was B. coli communis. Three-quarters of the patients had some kind or degree of pain; in half of the total number pain was sudden and severe in onset, gradually limiting itself to a special area. Tenderness and rigidity are usually present, except that a slack atonic abdominal wall may fail to become firm and hard even under the reflex stimulus of sudden peritoneal irritation. Distension is not an early symptom, and obliteration of the liver dullness is not to be relied on as a guide to diagnosis. Haemorrhage and chill have been described by various writers as common accompaniments of perforation, but Scott is unable to confirm either observation. The most important variation of temperature was a fall through 4° or 5° to normal or subnormal, occupying eight or twelve hours; the temperature should therefore be taken hourly when perforation is suspected. Leucocytosis may sometimes be found, and confirms a diagnosis of perforation; but the absolute value of the blood-count is small. There are many possibilities of error in the diagnosis; pleurisy, pneumonia, cholecystitis, and iliac thrombosis should especially be borne in mind and excluded if possible. Operation is called for in every case as soon as the diagnosis is made, closure of the perforation and drainage being all that is required. Thirty-nine of Scott's cases were submitted to operation with 12 recoveries; the 11 cases not surgically treated all ended fatally.

(212) Tuberculous Rheumatism.

WIART AND COUTELAS contribute an article on tuberculous rheumatism (*Rev. de la Tuberculose*, February, 1905). According to them arthralgia is the most frequent manifestation of tuberculous rheumatism, and must be distinguished from neuralgia and neuritis. Pain is not confined to the interior of the articulations, but, as in all pseudo-rheumatic conditions, the periarticular tissues participate in the lesion, sometimes to a very marked degree, so that the attention of the observer is altogether centred on the soft structures. No joints are immune, nevertheless the larger, as the hip, shoulder, knee, and elbow, are more frequently affected. The temporo-maxillary and vertebral articulations may be the first attacked, sometimes long before any others are involved. Pain may appear in a similar manner in advanced cases of tuberculosis and in those who show very little evidence of infection. It is frequently quite separate from any tuberculous lesion, and only the patient's previous history may give the keynote to the lesion. Pain may appear without any apparent cause, even during repose, but usually there is a history of some unusual or severe movement. Pain has been divided into three groups—muscular, bony, and articular. The first is rarely spontaneous and requires to be carefully sought for by palpation of the muscular masses. Without there being any common seat of election the biceps, triceps, pectoral, and calf muscles are the most frequently affected. Pain affecting bones is most usually observed at the lower extremity of the femur. The tibia, the olecranon, and the clavicles are sometimes affected, but more rarely. The pain is a dull deep ache, and may only appear on palpation, pressure, or percussion, or when the patient moves the affected limb. Less frequently it is spontaneous. The pain may be worse at night. Articular pain is very frequent, and often indefinite in character; it is less marked during rest, but aggravated by movement. Pressure, such as forcing the opposed articular surfaces together, is sufficient to elicit pain. In children, errors of diagnosis are frequent, and it is important not to confound tuberculous arthralgia or myalgia with growing pains so-called, or those pains which appear in the limbs of anaemic patients. Tuberculous pain may also be confounded with mild cases of osteomyelitis. A careful examination into the patient's personal and family history is therefore important. Gonorrhoea is one of those diseases that cause arthralgia as well as pain in other structures. It is necessary to guard against any mistake in diagnosis between it and tuberculous rheumatism. Gonorrhoeal rheumatism, however, has a predilection for certain situations, as the heel. It is worst in the morning and improves after exercise. None of these characters being pathognomonic, every fact bearing on the case must be weighed on its merits. Difficulty also arises in distinguishing between tuberculous arthropathy and the osteo-articular manifestations of secondary syphilis, especially those which occur early or late. Articular and bony pains, when due to syphilis, are worst at night and, as Fournier pointed out, are aggravated by rest and diminished by exercise. The joint is worst when the patient wakes. In tuberculous cases nocturnal pain is slight or absent. It is treatment which furnishes the key to the situation. There are cases of extreme difficulty of diagnosis, where tuberculosis and syphilis or gonorrhoea are combined. In congenital syphilis arthritis is rarely the only manifestation of the disease, and diagnosis is easier. Rachitis, osteomalacia, lesions of the spinal cord, and neoplasms sometimes give rise to difficulty. It is suggested by the writers that tuberculosis may possibly account for those cases of indefinite pain appearing in the lower extremities shortly after parturition. These are some of the manifestations of tuberculous rheumatism, and the writers therefore emphasize the importance of bearing it in mind when dealing with cases of ill-defined joint and limb pain which do not respond to ordinary antirheumatic treatment.

(213) Chronic Inflammation of the Lungs and Heart Disease.

ROTHSCHILD (*Berl. klin. Woch.*, xlii, No. 13, March 27th) discusses the immunity to tuberculosis in mitral stenosis. Congestion of the lung seems to act in a similar way to Bier's passive hyperaemia in preventing the development of secondary tuberculosis. Mitral stenosis may supervene in cases in which phthisis is already established, the conditions then favour the healing of the tuberculous lesion. Kryger found only 10 cases out of 1,100 necropsies on tuberculous bodies with evidences of a heart lesion, but he found 59 cases of healed or arrested tubercle in bodies with marked heart lesions. Cardiac disease seems to favour the development of pulmonary affections other than tubercle. Rothschild has observed 5 cases showing affections of the myocardium or pericardium, the pleura and lower lobes of the lung; in each site a chronic fibrous process, resulting from a primary inflammation of the connective tissues. The primary disturbance is usually pleurisy, and generally on the right side. This is followed by induration of the lower lobe of the lung; the spread of the process to the pericardium is shown by the presence of arrhythmia. The patients keep in comparatively good health in spite of recurring attacks of pericarditis, pleurisy, or slight haemorrhages. Tuberculosis was excluded in each case by repeated examinations of the sputa.

SURGERY.

(214) Semi-lateral Position in Operations for Appendicitis.

FÖRSTERLING (*Zentralbl. f. Chir.*, No. 30, 1905) reports that for a long time Professor Schlange of Hanover, in operating in cases of both acute and quiescent appendicitis, has modified the usual position of the patient on the table, with the result of facilitating to a considerable extent a free exposure of the seat of the disease. The body is turned over towards the left side, the right side being raised by about 4 or 6 in. so that a line drawn from one antero-superior spine of the ilium to the other forms with the surface of the table an angle of from 30 to 35 degrees. This modification has been very useful in cases of acute appendicitis in which there is not much suppuration and the intestines around the inflamed caecum are not firmly adherent. In such cases the intestines, which are usually much distended and project through the external wound, fall backwards towards the left side of the abdominal cavity and can be readily kept controlled by gauze pads and retractors. The appendix, especially when attached to the posterior surface or the lower extremity of the caecum, can then, it is stated, be exposed with surprising readiness. The semi-lateral position has been found advantageous also in cases of appendectomy performed in a

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quiet interval, but is certainly less useful in operations performed for the exposure of a large and circumscribed perityphlitic abscess.

(215) Modern Methods for the Prevention of Pneumothorax in Lung Surgery.

TUFFIER (*Bull. et Mém. de la Soc. de Chir. de Paris*, 24, 1905), in a report on a case communicated by Anlepas, of pneumotomy for bronchial dilatation, points out the great advantages during the performance of operations of this kind of preventing pneumothorax, which, independently of its immediate dangers, gives rise to the serious inconveniences of exposure of the wound to septic infection, and, in cases in which adhesions are absent, of rendering the union in the lung less accessible by reason of pulmonary collapse. A full and lucid description is given of the mechanical methods of preventing pneumothorax that have been recently devised. The pneumatic chamber of Sauerbruch, as is now well known, enables the surgeon to open the pleural cavity under a pressure less than that of the air within the lungs, so that when the pleural cavity is opened the lung does not collapse. The difference of pressure is obtained by rarefying the air within a large glass chamber enclosing the operator and his assistants and the patient, whose head lies outside the chamber, so that he can inspire the free external air. This apparatus, Tuffier holds, is cumbersome and complicated, and has, moreover, the disadvantage of rendering difficult any communication between the surgeon who is shut up in the chamber and the anaesthetist who is at work outside. On the other hand, Brauer has devised an apparatus for increasing the intrapulmonary pressure whilst the pleura is exposed to the normal atmospheric pressure, the result being the same as in Sauerbruch's method, as the lung does not collapse when exposed by opening the pleural cavity. In this method the face of the patient, after anaesthesia has been established, is enclosed within a glass case the air of which can be readily condensed by mechanical means. Tuffier reports favourably on this method, which he has applied with satisfactory results in 2 cases of transpleural resection of the oesophagus and in 1 case of thoracoplasty. In none of these patients, whose respiration and circulation the author watched with much anxiety during the operations, was any trouble caused by the use of Brauer's apparatus. If with the application of this method during an operation within the thoracic cavity more room be required, the intrapulmonary pressure can at any time be reduced and the lung be made to retract to the desired extent. Whilst acknowledging, on the one hand, that the mechanism of the methods of Sauerbruch and Brauer are very complicated, and, on the other, that practical surgery ought to be simple, Tuffier points out that when the surgeon has to guard against important complications, and to diminish as far as possible the danger of formidable operations, he should endeavour to carry out what is best for the interest of his patient, notwithstanding the complexity of the instruments which he finds are necessary to effect the object in view.

(216) Modification in Technique of Lateral Intestinal Anastomosis.

KÜSTER (*Zentralbl. f. Chir.*, No. 33, 1905) describes a method of applying Murphy's button in lateral intestinal anastomoses which, as he has been convinced by frequent experience, tends to shorten and simplify the operation without impairing its safety. In a case of resection, before the ends of the two portions of divided intestine are closed by sutures, the half of a Murphy's button is slipped into the lumen of each and retained at some little distance from the cut extremity of the intestine by an assistant. The two open ends of the intestine having been closed by a double row of sutures, the surgeon presses the central column of each half of the button against the intestinal wall and causes it to protrude through a very small incision made over it from without inwards. The two portions are then brought together in the usual way, and, unless the intestinal opening be too large, without any application of sutures. Much time is thus gained, and the risks due to faecal effusion are abolished or considerably reduced.

(217) Lipoma of the Pretibial Triangle of the Knee.

E. W. RYERSON (*Journ. Amer. Med. Assoc.*, July 1st) describes this condition, which is an overgrowth of the adipose pad behind the patellar ligament, due to traumatisms, etc., and causing sometimes serious interference with flexion and extension of the joint. It is diagnosed from capsular effusion by its non-extension above the middle of the patella and lack of fluctuation and floating of the patella; from tuberculous joint disease by lack of spasm of the hamstring muscles, which is always present in tuberculosis; from villous proliferation of the lower border of the capsule, by the absence of the peculiar feeling of the villi and by the limits of the growth. A chronic bursitis of the small bursa under the insertion of the patellar ligament offers the greatest difficulties in diagnosis of any condition unless fluctuation can be clearly elicited. The condition is more common than is generally believed; its growth is slow, the disability being gradually developed in the course of five or six years. The radical operation is safe and simple, consisting of an incision 2 in. long just on the outer side of the patellar ligament, carried down through the strong fascia lata expansion, the so-called patellar ligament. The fatty mass bulges out of the wound and is seized with strong artery forceps, and twisted out bit by bit, twisting being better than excision, as it avoids annoying haemorrhage. The whole space can be reached by the finger and forceps, and no incision need be made on the inner side of the tendon. With the incision on the outer side of the tendon there will be no tendency to the condition known as "slipping patella," which practically always occurs outward. After the fat has been removed and bleeding arrested, the fascia is carefully sewed up with chromicized catgut in a separate layer and the skin sewed with a subcuticular stitch of silkworm gut or wire. No drainage should be used, a sterile gauze dressing covered by a thick pad of non-absorbent cotton is applied. A long posterior splint is applied and is kept on for ten days to allow the fascia to unite firmly, though the patient may be allowed to walk two days after the operation. In all Ryerson's cases the results have been perfectly satisfactory. He has had no experience with treatment by strapping, iodine injections, etc., which at best are uncertain.

MIDWIFERY AND DISEASES OF WOMEN.

(218) Tuberculosis and Pregnancy.

MALSBARY (*Amer. Journ. Obstet.*, July, 1905) has collected a large number of clinical and pathological records of this grave complication. The theory that tuberculosis is especially liable to occur during pregnancy may be based on inaccurate reasoning, the disease being more frequently routed from a latent state by pregnancy or first recognized during gestation. On the other hand the seclusion of pregnant patients, a practice which Malsbary condemns, may place them under conditions that predispose to tuberculosis especially through close association with tuberculous patients. Pregnant tuberculous women require suitable exercise in the open air and sunlight and protection from conditions that predispose to secondary infection. The gravity of tuberculosis is increased in pregnancy, especially during the puerperium. Malsbary finds that the highest maternal mortality is in primiparae. Haemoptysis does not occur with especial frequency at the time of parturition. Pregnant women bear the tuberculin treatment remarkably well, whilst suralimentation, so valuable in tuberculosis under other conditions, may be detrimental during pregnancy owing to the strain imposed on the kidneys. Hyperemesis requires especial attention, but interruption of pregnancy is a serious step when the patient is tuberculous and usually not beneficial as far as pulmonary phthisis is concerned. Tuberculosis, however, is not a contraindication to induction of labour when demanded for other reasons; labour should be induced early or not at all in miliary and laryngeal tuberculosis. Tuberculosis seems to increase the sexual appetite and actually to predispose to pregnancy. In genito-urinary tuberculosis we should observe the axiom that a diseased member is best treated by rest. Marriage of the tuberculous is usually undesirable, but individuals who have shown no symptoms of any form of tuberculous disease for two years or more should not be deterred from marrying. Breaking off an engagement may do greater harm than marriage. Tuberculous women should not nurse children.

(219) The Toxaemia of Pregnancy.

W. S. STONE (*Med. Record*, August 19th) expresses the belief that the vomiting of pregnancy is a manifestation of toxaemia, the lesions of which are primarily an acute degeneration of the liver, amounting to necrosis and destruction of liver cells in the severe cases, and presenting lesions in many of the fatal cases essentially those of acute yellow atrophy. The metabolism is imperfectly carried out as a result of

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these lesions, and various unoxidized compounds are formed in place of urea, which in themselves are more or less poisonous. In support of this view he describes in brief 7 cases in which very careful urinary analyses were made. These are divided into two groups, the first including 4 cases of pernicious vomiting of pregnancy, and the second 3 cases of the pre-eclamptic type. In almost every instance leucin, tyrosin, and indican were found in the urine, and the author regards the presence of the latter constituent as a very important danger signal. He cautions against attempts to treat the pernicious vomiting of pregnancy on the assumption that it is of hysterical or reflex origin, and states that the mental symptoms dependent on the derangement of hepatic functions must not be disregarded. He continues by saying that while the majority of cases of pernicious vomiting of pregnancy present lesions that are different from those of eclampsia, yet he has clinical and pathological evidence that they are closely related. Symptoms of either group present themselves practically without urinary changes, as determined by the ordinary clinical tests. The persistent presence at any period of pregnancy of even a trace of albumin, especially if accompanied by casts, and a persistent increase of indican demand a more complete examination of the urine, which seems to be best accomplished by a determination of the total nitrogen and its partition. He recommends that the test for indican be included in the ordinary clinical tests, because it seems that, whatever the basic cause of the toxaemia may be, errors of diet and intestinal intoxication are one of the important contributing factors.

(220) Umbilical Hydrocele.

BONDI (*Monatschr. f. Geb. u. Gyn*, June, 1905) applies this term to a cystic tumour which he observed in a woman aged 62. For two years she had noticed increasing prominence of the navel, and at the same time the entire abdomen steadily increased in size. Bondi diagnosed ovarian cyst, and could define a tumour about 2 in. in diameter under the integuments of the umbilicus, which were pigmented. The tumour was tense and elastic, distinctly fluctuating, and tender on touch. It was quite irreducible, and no structure like the neck of a hernial sac could be made out. The ovarian tumour, which had a twisted pedicle, was removed without difficulty; there was about a pint of fluid in the peritoneum. The torsion accounted for the slight abdominal pain to which the patient had been subject; it was also recorded that she was naturally constipated. Bondi had already removed the umbilical tumour when making the abdominal incision; it was a cystic growth distinctly connected with the peritoneum by a thin pedicle. Beyond the prominence of the umbilicus, this cyst had not given rise to any symptoms, the cause of the abdominal pain being due to the torsion of the ovarian growth. The author describes the pathological appearances of the umbilical cyst at full length, and concludes that it was clearly of peritoneal origin, and hence simulated a "hydrocele" such as is seen in inguinal hernia. He considers that Hoffmann's case of cyst of the umbilicus was of the same class, and not of urachal origin; Roser and Walz also report similar cysts undoubtedly originating in the peritoneum. This cyst is congenital, and must be distinguished from an old hernial sac cut off from communication with the peritoneal cavity by closure of its neck.

(221) Primary Cancer of Fallopian Tube.

ROLLIN (*Ann. de Gyn. et d'Obst.*, July, 1905) observed bilateral primary epithelioma of the tubes in a woman aged 46, with no history of cancer in her family. One child was born sixteen years before the operation on the morbid growths, and there was a history of metritis and salpingo-oöphoritis four years after her only pregnancy. For about a year the patient suffered from dull hypogastric pains, accompanied by very free discharge of tea-coloured fluid, watery and odourless. The periods were regular and a little less free than before the illness, but paroxysms of sharp pain occurred during the catamenia. Micturition was painful. A tender swelling rose three fingerbreadths above the right groin, and descended into the pelvis; on vaginal exploration a second swelling was detected in the left fornix. The uterus was anteverted and fixed. Riche removed the two tumours, with the uterus and ovaries. The right was a dilated Fallopian tube of the size of an orange; the left was the opposite tube, distinctly smaller. Both contained chocolate-coloured fluid, and cauliflower masses of epithelial cancer sprang from the walls of the tubes. The ovaries were absolutely healthy. The patient recovered from the operation, and was discharged from hospital at the end of January, 1905.

(222) Sterilization of Sea-tangle Tents.

O. L. MULOT (*Med. Rec.*, August 19th) advises soaking sea-tangle tents for seventy-two hours in tincture of iodine, and then immersing them in 95 per cent. alcohol, to remove the surplus iodine. Another method is to boil the tents and then dry them in sterile test tubes for a few days in an oven or hot air chamber, which will cause them to shrink to their original size. Or the two methods may be combined, first boiling and shrinking them, and then soaking in iodine. The author believes that the tents furnish the most desirable means of dilating the cervix in some cases, and when prepared in this way their use is free from danger.

THERAPEUTICS.

(223) The Prescription of Digitalis.

H. EICHHORST chooses as the subject of a discourse, "the indications and method of the digitalis therapy" (*Deut. med. Woch.*, January 2nd, 1905), because he believes that when properly used, much can be done by means of the foxglove. He states that the full action of digitalis is well exemplified in 4 cases, which he has treated very recently, and in which he set his whole hopes on the drug. One of the patients was suffering from uncompensated mitral disease, complicated by cyanosis, dyspnoea, oedema, ascites and hydrothorax and partial anuria. After three days, the quantity of urine increased from 300 c.cm. to 5 000 c.cm. in twenty-four hours, the irregular and rapid heart beat gave place to a beat of 84 in the minute, and lost all its irregularity and intermittence, while the dropsy became very markedly less during the same period of time. The second patient had aortic regurgitation, and showed all the signs of want of compensation. Here again the drug worked completely and rapidly. The third and fourth cases were those of hypertrophy and dilatation of the heart depending on arterio-sclerosis, and sero-fibrinous pericarditis following acute rheumatism respectively. In both the alarming and distressing symptoms were quickly removed, and the cardiac action regulated. He regards digitalis as the best cardiac tonic which we possess, and gives as the indication for its use weakness of the cardiac muscle. Disease of the valves and of the muscle itself are the most common causes of weakness of the muscle, but affections of the pericardium, of the coronary arteries and of the aorta are also not rare causes. With regard to valvular diseases, he finds that it is a mistake to limit the use of digitalis to mitral disease, but says that when the weakness of the cardiac muscle follows aortic disease the drug is just as much in place and will answer just as well as when it follows mitral disease. Another large class of pathological conditions which may lead to weakness of the heart muscle is included in the chronic diseases of the respiratory organs. Disease of the kidneys may also produce this condition, as may also infectious illness, general weakness, certain poisons, or even psychical excitement. Digitalis acts on the weakened heart muscle slowly and permanently, and therefore is not of use in fainting conditions or reflex conditions, when the more evanescent stimulants should be employed. He does not believe that digitalis acts at all on the cardiac nerves. It has been claimed for foxglove that it has a specific action in pneumonia, uraemia, and other conditions, but Eichhorst does not accept this. The full action of digitalis, in his opinion, is obtained by using the leaves and not by infusions, tinctures, or other extract preparations. He usually prescribes 0.1 gram of the powdered leaf (about 1½ gr.) together with 1 gram of diuretin and 0.3 gram of sugar. One such powder is taken three times a day. The only other digitalis preparation, which he mentions as having given him fairly good results, is Cloëtta's digalen. The dialysate of digitalis has disappointed him. He has had very little experience of the digitalis glucoside, but as he has used it, he does not like it nearly as well as his powder. He finds that if one wishes to use digitalis usefully one must not be afraid of employing full doses. Too much, however, should be avoided, but it is better to err on the side of a little too much than a little too little. As a rule, he gives the powder three times a day for ten days, but here the individual characteristics of the patient must decide. He even goes so far as to employ a "chronic" digitalis therapy in certain cases, mostly using two or one powder daily in accordance with the symptoms. This may be continued for many weeks. The unpleasant actions of

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digitalis are much less frequent after his powder than after the other digitalis preparations. In warning, he cites cases in which digitalis failed to produce the desired result during the first administration, but acted when the treatment was begun for a second or even third time. He finds it better not to give digitalis as soon as the patient is under treatment. First he puts him to bed, and the rest and milk diet is kept up from one to three days. If the symptoms do not disappear by themselves then he orders his powder. One should be prepared for a certain erratic action of digitalis to show itself at times. It is therefore wise not to be in a hurry to give up the attempt of treating by its means if it apparently fails at first.

(224) Asepsis of the Hands.

REVERDIN AND MASSOL (*Revue Méd. de la Suisse Romande*, January 20th, 1905) have undertaken a series of experiments which show that asepsis of the hands can never be absolutely realized, no matter how much care is used. They show that mechanical scrubbing with a sterilized brush and hot water in a sterilized basin is the best method. The best antiseptics are hermophenyl 50 per per cent., and water oxygenated to 12 volumes; these do not damage the skin, but they require thirty minutes' prolonged application. Contrary to the general opinion, the authors demonstrate that sweat does not infect the hands. When the number of germs is increased after sweating it is due to insufficient cleansing of the hands. Hyperidrosic hands after cleansing attain a higher degree of purity than dry hands, because the latter are more or less squamous, and the squames retain the microbes. On hands which are constantly kept clean the microbial flora varies with the nature of the contacts. The more energetic the washing, the more is the bacterial flora simplified, till finally nothing is left but the polymorphous coccus of Cedercrentz, the habitual parasite of the skin.

(225) Treatment of Erysipelas with Serum of Convalescents.

L. FORNACA (*Il Policlin.*, July, 1905) finds that widely-varying opinions are held as to the efficacy of antistreptococcic serums, whether monovalent or polyvalent. Hence the desirability of trying further serum treatment, if possible resting on a more certain basis. Hüber and Blumenthal treated cases of scarlatina, measles, pneumonia, and erysipelas with an artificial serum prepared by dissolving antitoxins from the serum of convalescents in a physiological serum containing 10 per cent. of chloroform, and filtering through the Berkefeld-Nordmeyer apparatus. The results were good, but not remarkable, in measles, and were negative in 9 cases of erysipelas and 1 case of puerperal septic pyaemia. Scholz and Pfeiffer treated 9 children with scarlatina with serum from convalescents, and obtained negative results. Lenhartz and Ehrlich very successfully treated 2 cases of streptococcic infection, 1 of otitis media, and 1 of septicaemia after abortion, with human serum. A severe epidemic of erysipelas in Turin gave the author an opportunity of obtaining serum from convalescents, and injecting it almost immediately into other cases, and comparing the results with those obtained by ordinary treatment. The epidemic was severe. For the most part cases treated by local applications and by general measures directly adapted to sustaining the strength of the patient, lasted usually from nine to fifteen days, with high temperature and serious illness. Nine cases were selected for serum treatment, severe cases under observation in the clinic for twenty-four hours without showing any sign of improvement. In each case the process was localized in the face. The serum was taken from some of the worst of the remaining cases (once from a patient already treated by serumtherapy), being removed from the arm on the second or third day of convalescence, and kept in ice for the short time before use. Strict antiseptic precautions were employed. The date of injection varied from the third to the eleventh day of the illness, the number of injections from one to three, the amount injected at one time from 10 c.cm. to 50 c.cm., and the total amount from 20 c.cm. to 90 c.cm. The nine cases are reported in some detail, and their temperature charts are reproduced. The effect of injection was usually seen in a fall of temperature, which sometimes quickly became normal, in the return of appetite, and of a feeling of well-being, and the rapid disappearance of headache. It affected the general condition of the patient, both objective and subjective, but not the local erysipelatous condition. In at least seven out of his nine cases Fornaca considers that he obtained positive results. He also investigated the action of the blood serum of convalescents from erysipelas on streptococci cultivated in one case from a patient with erysipelas, and in another from a sore throat. He concludes that the serum has no bactericidal effect on the streptococcus, but diminishes its virulence, more especially in the case of the streptococcus cultivated from a patient with erysipelas. The blood was examined for streptococci in 15 cases and they were found four times. Albuminuria was found in one-third of all the cases, and with albuminuria streptococci were present in the urine. The author attaches no prognostic importance to the finding of albumen. Six cases are recorded in which blood serum was removed from the patient and re-injected a day or two later into the same patient after being heated to 55° C. This process had the same effect on the general condition as the injection of serum from convalescents. Experiments are reported showing the production of leucocytosis by the injection of blood serum taken either from convalescents or from patients still suffering from erysipelas.

(226) The Treatment of Appendicitis.

SCHMITZ (*Berl. Klin.*, May, 1905) in a review of the present-day teaching as to the treatment of appendicitis, says that the variety of opinion which exists is due to the fact that in so many cases the clinical condition does not correspond in severity to the pathological lesion. With the same degree of local disease the severity of the symptoms and the danger to life may be exceedingly different. The writer deals with 116 papers, representing Continental opinion. He sums up definitely against the expectant method of treatment. This should only be followed in cases which are slight and acute, and can be kept immediately under skilled observation. All other acute cases should be surgically treated within forty-eight hours. Now that the abdomen can be opened with almost entire freedom from risk, the danger of this proceeding is considerably less than that of allowing the disease to take its course. Operation between the attacks is recommended when these are slight and recurrent, and also in the chronic form where the symptoms fail to entirely disappear after the patient has suffered from an attack. Drainage by means of the rectum or vagina is recommended for abscesses in the pouch of Douglas. The author does not speak favourably of flushing the peritoneal cavity when peritonitis has become general.

PATHOLOGY.

(227) Indigouria.

BUT rarely do indoxyl combinations appear in the urine in quantity sufficient to produce the spontaneous appearance of indigo. Dixon Mann (*Med. Chron.*, 1905, p. 361) describes the case of a girl, aged 18, in whom catarrhal and ulcerous conditions of the intestines, with diarrhoea, were accompanied by great excess of indoxyl products. The urine was acid, specific gravity 1020 to 1026, dark in colour, and frequently deposited urates. These urates carried down amorphous particles of indigo blue which were visible with the microscope. Extraction with chloroform yielded a blue solution which gave the spectrum of indigo blue. The residue left after evaporation of the chloroform, when heated, volatilized in the form of a reddish-purple vapour, which deposited microscopic crystals of indigo blue. The addition of hydrochloric acid, without any oxidizing agent, was sufficient to produce a deposit of flakes of indigo blue. The daily amounts of indoxyl combinations were determined on three occasions:

	Indigo-blue.		Phenol.
1.	41.2 mg.	...	0.0470 gram.
2.	47.0 ,,	...	0.0826 ,,
3.	53.1 ,,	...	0.2110 ,,

In (2) and (3) spontaneous deposit of indigo-blue occurred. When the urine was allowed to stand in an open vessel for a day or two it deepened in colour to a brownish-black, and the surface acquired a blue iridescent appearance. The deepening in colour was due to the development of oxidation products of pyrocatechin. Melanogen was absent. A small amount of diacetic acid was present. Glycuronic acid was also present in considerable quantities. The ether-sulphuric acid ranged from 0.3 to 0.7 gram during the twenty-four hours. The preformed sulphuric acid was much diminished—0.9 to 1.2 gram. The case tends to support the view that glycuronic acid acts as an antitoxic agent by combining with the excess of aromatic bodies formed in the course of bacterial aloine putrefaction, and thus renders them inert.

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