EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

462. The Schick Reaction and Passive Immunity to Diphtheria.

G. FRONTALI and M. RASPI (*Riv. di Clin. Ped.*, February, 1925, p. 73) examined the Schick reaction in 413 normal Florence children, aged from 1 month to 12 years, with the following results. (1) 26.1 per cent. were positive—a figure considerably below that found in Vienna and New York children (60 per cent.). (2) The frequency curve commenced with a minimum of 20 per cent. in the first year, reached a maximum of 38.5 per cent. between the second and fifth years, and then gradually fell to 25.7 per cent. between the fifth and eighth years, and to 23 per cent. between the eighth and twelfth years. (3) Among 161 diphtheria patients the reaction, which was intensely positive before treatment, became invariably negative after serum treatment and remained negative until twenty days after the last injection of serum. Intramuscular injection of 3,000 to 5,000 units two to three hours after intradermic injection of toxin had not the power to inhibit the appearance of a positive reaction. It was only when the test was performed after the injection of 3,000 to 5,000 units that the reaction was negative. In two cases intradermic injection of toxin performed simultaneously with intravenous injection of 5,000 units of antitoxin was followed by a negative reaction. When the test was made three to six hours after intramuscular injection of 2,000 to 5,000 units of antitoxin, it was always negative. (4) The reaction remained negative after the appearance of serum eruptions. (5) In diphtherial paralysis the reaction was positive if the patient had had no serum, but was always negative when serum had been given in the acute stage. (6) The frequency of positive reactions was greater in measles (60 per cent.) and in scarlet fever (51.8 per cent.) than in normal children. (7) The repetition in series of the Schick reaction did not have an immunizing effect. (8) Normal horse serum like antidysenteric and antimeningococcic serum in doses of 30 c.cm. for children weighing 12.2 kilos may inhibit a positive reaction. (9) To obtain the same effect with diphtheria antitoxin 2.5 units per kilo of body weight are sufficient. (10) In guinea-pigs weighing 500 grams 0.5 to 0.6 c.cm. of normal horse serum is needed to make the Schick reaction negative, while the same result is obtained with 0.5 antitoxin units contained in 0.00012 c.cm. of diphtheria antitoxin—that is, in a volume of serum 5,000 times smaller.

463. Paroxysmal Oxaluria.

F. LOMMEL (*Med. Klin.*, February 6th, 1925, p. 194) points out that the term "oxaluria" indicates merely that the urine recently passed contains a large quantity of crystals of calcium oxalate; it does not refer to the amount of oxalic acid the urine contains. The author applies the term "paroxysmal oxaluria" to the paroxysmal occurrence of such sediments in the urine, with characteristic symptoms, of which the most important are severe renal pains like those of renal colic. The urine usually contains, in addition to the numerous crystals of calcium oxalate, a small quantity of blood; in the intervals between the attacks both are absent from the urine. The author records in detail the clinical history of one case. He thinks that the attacks possibly depend on altered conditions of solution and precipitation of oxalic acid, and the relation of this to colloid substances in the urine is discussed. If the calcium oxalate is precipitated in the kidney, as is probable, it is easy to understand why haematuria and pain occur. The attacks in many cases cease spontaneously: in other cases they are terminated by a complete change in the mode of life, with diminished strain on the nervous system. The author has not been able to decide if dietetic measures or certain drugs have any beneficial effect.

464. Pulmonary Tuberculosis in Childhood.

F. G. CHANDLER and T. W. PRESTON (*Brit. Journ. Child. Dis.*, January–March, 1925, p. 1) record their observations on a study of nearly 300 cases of pulmonary tuberculosis in children during the last twelve years. Although the diagnosis of pulmonary tuberculosis was definitely proved in only 89 by finding tubercle bacilli in the sputum or by autopsy, the rest were probably early cases of pulmonary or possibly hilum tuberculosis. The ages of the 89 patients whose histories are set forth in tabular form ranged from 3 to 14 years. In all the cases the lungs, or perhaps the mediastinal glands, were primarily affected. No examples of miliary tuberculosis were included, with the exception of three children who were admitted with obvious pulmonary tuberculosis and died of a terminal miliary affection. Of these 89 children 61, or 68 per cent., were females and 28 were males; 39 were 12 years and under, and 22 were 10 years and under. As the result of treatment 35 were improved, 19 were discharged with the condition unchanged, 27 died, and 2 were still in hospital. The authors' conclusions are as follows: Pulmonary tuberculosis does occur in infancy and childhood, and is not extremely rare. It may run a long chronic course, and is not necessarily fatal. The stronghold of the disease is the bifurcation and bronchial glands, and the lungs are probably infected from this source. Before a diagnosis of intrathoracic tuberculosis is made every care should be taken to exclude other chronic infections, but when this has been done there should not be too great a reluctance to diagnose tuberculosis, especially when such symptoms as cough, febrile attacks, and poor nutrition are predominant features.

465. Herpes Zoster and Varicella.

E. C. AVIRAGNET, J. HUBER, and DAYRAS (*Bull. et Mém. Soc. Méd. Hôp. de Paris*, February 12th, 1925, p. 185) report the case of a girl, aged 14, suffering from concurrent herpes zoster and varicella. The herpes appeared as three distinct patches, the first being in the seventh intercostal space external to the left breast, and the second and third in the tenth and eleventh intercostal spaces respectively. They also describe a case in which typical crural and gluteal zoster in a boy, aged 5, was followed fourteen days later by varicella in his two brothers. The authors conclude that the virus of varicella has a special and sometimes an exclusive affinity for the posterior ganglia. They maintain that some zosters, whether pure or associated with typical varicella, are of the varicella nature, and that the time has come to add to the classical description of varicella two clinical forms of the disease—one zoster-varicella, and the other the pure zoster form of varicella. COMBY (ibid., p. 192), while admitting that varicella may give rise to zoster in the same way that whooping-cough, measles, scarlet fever, typhoid fever, and especially tuberculosis do, disputes the contention that zoster may give rise to varicella, and regards such cases merely as coincidences. A. NETTER (ibid., p. 192) mentions two cases of generalized varicella coinciding with herpes zoster, the eruption being so profuse in one case that the patient was certified as suffering from small-pox. In 76 out of 78 cases of zoster of all kinds Netter and Urbain claim to have established the existence of varicella antibodies. Netter therefore concludes that zoster is not merely a specific infectious disease as Landouzy has maintained, but is usually, if not always, a manifestation of varicella infection.

Surgery.

466. Torsion of the Spermatic Cord.

G. MASSA (*Il Policlinico*, Ann. 32, February 2nd, 1925, p. 164) reports two cases of this uncommon condition. (1) A boy, aged 14, whilst sitting quietly, was seized with severe pains in the right testicle, vomiting, and tenderness. A few hours later the testicle was swollen, higher than usual, and movable to a certain extent; there was no history of injury, hernia, or urethral trouble. Under local anaesthesia the swelling was explored and it was found that the spermatic cord was completely twisted on itself in a direction reverse to the ordinary movement of a clock. The testis was engorged and cyanotic, there was an unusually roomy tunica vaginalis, and the vessels of the cord were separated into two bundles. The cord was untwisted, and complete recovery followed without any atrophy of the testis. (2) A man aged 26, after a long bicycle ride, noticed pain in the right scrotum. A few days later a condition similar to the first case was seen, and on operation the cord was found to be twisted, the testis cyanotic and engorged, with signs of atrophy. The cord was untwisted, but part of the testis ultimately became necrosed and atrophy developed. The different result in the two cases illustrates the advantage of treating these cases early. In differential diagnosis the chief difficulty is the possibility of hernia, which may coexist. The degree of twisting varies, but even a small twist soon affects the testis, so that early operation is advisable.

467. "Red Stomach."

J. SCHOEMAKER (*Surg., Gyn. and Obstet.*, March, 1925, p. 305) remarks that every surgeon has experience of performing laparotomy for gastric or duodenal ulcer and finding neither present. He has noticed that in some of these cases the pyloric portion of the stomach showed a vivid red colour: the stomach was usually normal in size and there were no signs of induration or ulcer. Moynihan described a somewhat similar condition secondary to inflammation elsewhere in the abdomen, generally in the appendix. Schoemaker bases some conclusions on 45 cases of this so-called "red stomach." In 17 gastrectomy was performed, and in these cases there was intense hyperaemia of the serosa. The appendix was only affected in 4 cases and so could not be considered to be the cause of the condition. Removal of the appendix in 6 cases did not relieve the symptoms. In 3 cases the gall bladder was found to be diseased and was removed, with good results. Schoemaker thinks that the primary cause may be found in the sympathetic nervous system. The symptoms in such cases are pain after food with periods of latency, nausea, sour eructations, and rarely vomiting. Radiograms show a normal stomach with some retention. He advises that when a red stomach is found on laparotomy the gall bladder should be examined. If it is normal the abdomen may be closed or gastrectomy be performed. Gastrectomy has but a slight risk and is simple in these cases; in 50 per cent. the patients are healed. Therefore the author gives his patients the 50 per cent. chance, and considers the reasons are sufficient for performing a gastrectomy in these cases.

468. Secondary Growths of the Bones.

P. DELBET (*Bull. Assoc. Franç. du Cancer*, January, 1925, p. 10) remarks that tumours of the skeleton are often thought to be primary when in reality they are secondary to a growth elsewhere in the body. Operations for their removal are therefore useless. He states that tumours of bone which reveal themselves in the first instance by a spontaneous fracture are usually secondary and are not osteosarcomata; tumours arising in the diaphysis are more often secondary than primary growths, and multiple tumours of bone are usually secondary growths. Spontaneous fracture in an osteosarcoma occurs usually late in the disease and the presence of the tumour has been already recognized. In secondary growths, however, it may be the first manifestation of the condition, even before there is any obvious swelling. Delbet finds that the majority of primary bone tumours, innocent or malignant, start in the epiphysis or juxta-epiphyseal region. Periosteal sarcomata arising in the shaft of the bone are uncommon. He concludes that when a tumour of bone is discovered, either through a spontaneous fracture or arising in the shaft, a very thorough examination is necessary before any operation, since the primary growth may be very small or situated in the viscera and be difficult to discover. Delbet reports a case of carcinoma of the breast in which secondary growths were present in the upper limb and in the pelvis. In another case, after resection of the humerus for a spontaneous fracture of it, secondary deposits were found subsequently in most of the bones and also in the viscera. The primary site in this case could not be discovered.

469. Peptic Ulcer of Meckel's Diverticulum.

J. SENÈQUE (*Presse Méd.*, February 18th, 1925, p. 221) has collected 8 cases of peptic ulcer of Meckel's diverticulum, including Brasser's case (*Epitome*, December 13th, 1924, para. 465). In 4 cases the lesion was only discovered at autopsy; in the other 4 cases it was found in the course of an exploratory laparotomy, and all these patients recovered. Senèque draws the following conclusion from the published cases. When symptoms of haemorrhage or of peritonitis occur in the course of an exploratory operation without obvious cause it is important to ascertain whether Meckel's diverticulum is diseased. In the 4 cases which recovered, the original diagnosis was incorrect, but a careful search revealed the actual lesion. Thus the class of cases of "primary peritonitis" has been further restricted and it is probable that other cases of this condition will be reported. Until 1913 no case had been reported, while in 1924 three cases occurred. In regard to etiology, all the patients were males; 5 patients were between 6 and 13 years of age. The patient of Hallopeau and Humbert was only 11 months old, while the patient operated upon by Mégevant and Dunant was 28 years of age. Hübschmann's patient lived for four weeks after a fall of about 5 feet; it is possible that this fall hastened the perforation. Nearly all the ulcers showed macroscopically a more or less definite induration of the surrounding tissues. In 4 cases the ulcer was near the base of the diverticulum, in 3 cases near its apex, and in 1 case near its centre. As a general rule the perforation was lenticular. Guibal noted the existence of a band 3 mm. in thickness and 8 cm. in length attached to the caecum and ending in a tumour on the ileum situated about 50 cm. from the ileo-caecal angle. In Brasser's case the apex of Meckel's diverticulum was attached to the appendix without any communication with its lumen. Humbert has proved that in these cases the mucous membrane resembles that of the stomach, and therefore the ulcers are of the true "peptic" type. Senèque adds that haemorrhage is usually abundant and is generally of the melaenic type; hence the condition has been diagnosed as (*a*) duodenal ulcer, (*b*) tuberculous ulcer, and (*c*) polypus. Resection of the diverticulum is the operation indicated, but if on account of the patient's condition this is inadvisable the perforation must be closed, postponing resection of the diverticulum or of the ileum to a later date.

Therapeutics.

470. Sanocrysin Treatment of Tuberculosis.

K. FABER (*Ugeskrift for Laeger*, March 26th, 1925, p. 315) has treated 36 cases of pulmonary tuberculosis with sanocrysin between September, 1924, and March, 1925. The dose of the first intravenous injection was 0.5 gram, and the dose of the subsequent injections was usually 1 gram. The intervals between the injections were usually from two to six days, and it was found advisable not to repeat an injection until the febrile reaction from a previous injection had passed off. The disease in every case was more or less chronic, and there were no complications at the commencement of treatment. Of the 36 patients 3 were in desperate straits when the treatment was begun, and their early death could not be ascribed to it. There were two patients whose death was probably caused by the treatment, with which the author had at the time but little experience. Two other patients discontinued the treatment at their own request, although the physical signs indicated that it was beneficial. A patient suffering from pleurisy without signs of pulmonary disease recovered completely. There were also 12 patients who had not yet completed treatment, and who could not, therefore, be regarded as criteria of its efficacy, although all tolerated it well, and the sputum of some had ceased to contain tubercle bacilli. Thus there remained 16 patients who, having completed the treatment, and having been chosen for it as suitable cases, formed a material by which the value of the drug could be judged. The author gives full details of the first 4 patients in this group, and he points out that the remarkable recovery effected within a couple of months was such as is only seen under ordinary treatment continued for a much longer period. All but one of the first 7 patients in this group were freed from the tubercle bacilli in their sputum, and this patient had almost ceased to expectorate. Four other patients, whose pulmonary disease was of a fibrotic character, showed little change in the physical signs, but 3 had ceased to expectorate; they all felt much better, being no longer febrile and weak. The remaining 5 patients did not respond so satisfactorily to the treatment, which in some cases was, however, beneficial up to a certain point. Faber concludes that this treatment marks an important advance, and that it is particularly valuable in comparatively recent cases in which the disease is pneumonic rather than fibrotic. Patients with a high temperature are not as a rule suited for it—for this reason, among others, that the fever of the untreated disease masks the fever of the sanocrysin reaction, which must have subsided before another injection is given. Again, the severity of sanocrysin shock seems to be proportional to the height of the temperature at the commencement of treatment, and it is therefore well to defer it in febrile cases till the temperature has been reduced by other means. The author is doubtful about the value of intramuscular injections of serum, and has found that it does not always prevent or cure albuminuria. This he traces to gold poisoning rather than to sanocrysin shock, having found that, while the febrile reaction diminished as the injections proceeded, the albuminuria was apt to become more severe.

471. T. NEUMANN (*Tidsskrift f. d. Norske Laegef.*, March 15th, 1925, p. 292) reviews the latest experiences of Danish physicians with sanocrysin, the dosage of which has recently been considerably changed from that originally recommended by Moellgaard. The dosage which struck the author as being most safe and promising was that adopted by Bogason of the Sölleröd Sanatorium. His aim is to avoid severe reactions and to increase the dosage very gradually. He begins with 0.05 to 0.1 gram by intravenous injection, increasing to 0.125, to 0.15, to 0.2, to 0.25, and so on, with intervals of four days between the injections. When he reaches a dosage of 0.3 gram he distributes the dose over two days, giving 0.2 on one day and 0.1 on the next. The results so far have been satisfactory, the patients being able to be up and about,

following the ordinary sanatorium routine. All the patients felt better, although they were fairly severe cases. In most cases the sputum and the number of tubercle bacilli therein dwindled. There was a gain of appetite and weight, and some of the patients became afebrile. There were no complications apart from slight diarrhoea, which responded readily to tannin enemas. The supplementary use of serum proved unnecessary with this cautious dosage, which has, however, been given a trial only for two months. With regard to the more heroic dosage, some institutions continue to give as large quantities as the patient can tolerate, whereas others do not exceed a dose of 1 gram at a time.

472. Sanocrysin Shock or Gold Poisoning?

O. SCHEEL (*Tidsskrift f. d. Norske Laegef.*, March 15th, 1925, p. 289) records a fatality from sanocrysin, the circumstances of which suggest that death was due rather to gold poisoning than to the "tuberculin shock" which Moellgaard has described. The patient was a woman, aged 27, suffering from severe pulmonary tuberculosis, the prognosis of which, under ordinary treatment, was doubtful or bad. She was given four injections of sanocrysin, the doses being 0.5 gram followed by three doses of 1 gram each. The intervals between the injections were two, four, and seven days respectively. She was also given several injections of serum. During the treatment she suffered from loss of appetite, nausea, vomiting, diarrhoea, albuminuria, hiccup, and oliguria. After the last injection there was almost complete suppression of urine, but no oedema. This injection was given on February 11th, and death occurred on February 13th. During the last hours of life there was increasing cyanosis, but no fall of temperature, and no sign of a focal reaction in the lungs. The necropsy showed hyperaemia and oedema of the lungs, hyperaemia of the colon, haemorrhages in the small intestine, and severe degeneration and necrosis of the kidneys. This parenchymatous disease of the kidneys, and the changes found in the intestines, were reminiscent of poisoning with mercury perchloride, and were probably due to direct poisoning with the gold salt. The absence of a fall of temperature, supposed to be characteristic of "tuberculin shock," is also interpreted by the author as indicating gold poisoning rather than a kind of Herxheimer reaction. In further support of this view the author notes that a Herxheimer reaction, due to the liberation of toxins by the action of a chemotherapeutic remedy on micro-organisms in the body, does not damage the kidneys when tuberculin is given to tuberculous guinea-pigs; it is only when such guinea-pigs suffer from tuberculosis of the kidneys themselves that an injection of tuberculin causes hyperaemia of the kidneys in the neighbourhood of the tubercles. Hence the author's conclusion that it is incorrect always to ascribe albuminuria and renal disease to the action of toxins set free by an injection of sanocrysin; they are probably due in the main to direct action of the gold salt on the kidneys.

Anaesthetics.

473. Prevention of Post-anaesthetic Vomiting.

E. SATTLER (*Deut. Zeit. f. Chir.*, February, 1925, p. 129) states that post-anaesthetic vomiting may be caused by two factors—namely, (1) direct stimulation of the medulla oblongata in the neighbourhood of the respiratory centre; (2) reflexly through the gastric branches of the vagus, and especially through the fibres ending in the neighbourhood of the cardiac orifice. Prevention of post-anaesthetic vomiting is effected by rapid removal of the narcotics stimulating the medulla, and by diminution of the stimulation of the gastric fibres of the vagus. Sattler has found that administration of lobelin was most suited for this purpose in the form of crystalline lobelin hydrochloride. After injection of this preparation the respiratory rate of the anaesthetized patient became twice as quick and also deeper and more intense. Sattler's observations, which were confirmed by Wieland in man and animals, were derived from the study of twenty-six patients, twenty-four of whom received ether only and two chloroform as well. Only one patient, who had been operated on for fistula of the bile duct, vomited after the operation, and another suffered from nausea, but none of the other patients vomited or felt sick. The nature of the operations was as follows: cholecystectomy, 4; pancreatic cysts, 2; appendicectomy, 3; abdominal tumours, 5; strangulated hernia and peritonitis, 2; intestinal obstruction, 3; undescended testicle, 2; carcinoma of breast, 1; carcinoma of rectum, 1; carcinoma of jaw, 2; and carcinoma of femur, 1. The duration of the operation ranged from thirty-five to ninety minutes, and the amount of ether used from 350 to 1,200 c.cm. Immediately after termination of the anaesthesia 1 c.cm. of lobelin was injected subcutaneously. Larger doses were never required. Sattler is at present conducting experiments to determine whether the effects of the lobelin are due to stimulation of the respiratory centre or to a direct action on the vomiting centre in the medulla.

474. Headache complicating Spinal Anaesthesia.

CH. DUJARIER (*Bull. et Mém. Soc. Nat. de Chir.*, February 7th, 1925, p. 115) draws attention to the fact that headache is the most frequent complication after spinal anaesthesia. Following the advice of Chaput, he has frequently tried to relieve this by a further puncture to bring about decompression, but he was often unsuccessful and the cerebro-spinal fluid has been found to be under very low pressure. He has noted in some cases a profuse leakage of cerebro-spinal fluid through the skin puncture after injection, whilst in other cases it appeared probable that the fluid had leaked into the subcutaneous tissues; this would naturally result in a fall in pressure of the cerebro-spinal fluid. Dujarier considers that this lowering of tension of the cerebro-spinal fluid may be the cause of the headache, and he has noted the early occurrence of headache in those cases where an excess of fluid had been withdrawn. He therefore advises the use of a very fine needle for the puncture. When headache occurs he has adopted the intravenous injection of 10 c.cm. of distilled water, which usually relieved this symptom completely, either immediately or on the following day.

475. Local Anaesthesia in General Surgery.

A. BERGAMINI (*Il Policlinico*, Sez. Chir., March 15th, 1925, p. 113) remarks that in cases of strangulated hernia, intestinal obstruction, septic peritonitis, severe anaemia, and, generally speaking, every case in which organic resistance is reduced and the natural defences are paralysed by stercoraemia, septicaemia, or prolongation of the disease, the intoxicating and depressing action of a general anaesthetic is largely responsible for many operative failures, every hour of general anaesthesia by chloroform or ether being equivalent to the loss of a litre of blood. On the other hand, the advantages of local anaesthesia are numerous. Novocain, he thinks, is still the best local anaesthetic; not only is it six times less toxic than cocaine, but it possesses a high anaesthetic power. It is non-irritating and does not cause vaso-dilatation. The only point against it is the short duration of the anaesthesia produced by it, but this may be obviated by the addition of adrenaline, which by its constrictor action considerably increases the degree of anaesthesia, and at the same time prevents a rapid absorption of a large quantity of the anaesthetic. Bergamini uses a freshly prepared watery solution of novocain, its strength ranging from 0.10 to 0.15 per cent., with the addition of 1 mg. of adrenaline. About 50 to 100 c.cm. of the solution is generally sufficient for any operation, since it produces an anaesthesia which lasts about one and a half hours. About forty-five minutes before the operation 1 cg. of morphine is injected. Among 533 cases operated on at the Verona Hospital local anaesthesia alone was used in 62 per cent., and in association with general anaesthesia in another 11 per cent., so that in only 27 per cent. was general anaesthesia alone employed.

476. Delayed Deaths following Chloroform Anaesthesia.

REICHEL (*Zentralbl. f. Chir.*, March 28th, 1925, p. 696) states that from 160 to 180 cases have been recorded in which a characteristic syndrome has developed after chloroform anaesthesia, always ending fatally in from one and a half to five days. The necropsy always shows very severe degeneration of the liver, with the appearance of acute yellow atrophy. A similar clinical picture and anatomical findings can be produced experimentally in animals by intoxication with chloroform. The occurrence of this syndrome is favoured by diseases which cause fatty degeneration of the liver, especially infective processes in the abdominal cavity. The condition has been most frequently observed hitherto after operation for acute appendicitis. Young persons, especially children, are most susceptible. The extreme rarity of this sequel, and the occurrence of several cases in one week, as was recently observed by Reichel, suggest that it is not pure chloroform but its decomposition products, or an impure chloroform, which are really responsible for these cases of intoxication. The practical conclusion to be drawn is that, in spite of its obvious advantages, the use of chloroform should be restricted as far as possible, since every bottle of chloroform cannot be examined before use. In children particularly, Reichel adds, the use of chloroform should be abandoned.

Obstetrics and Gynaecology.

477. Indicanaemia in Pregnancy.

J. A. VAN DONGEN (*Nederl. Tijdschr. v. Geneesk.*, February 14th, 1925, p. 738) reviews the literature and records the results of his examinations for indican in the blood of sixty women, who were grouped as follows: (1) Five were non-pregnant women, three of whom were suffering from metrorrhagia and two from salpingitis. In the latter the indicanaemia was above the physiological amount but below the upper limit of the normal (2.24 mg. per litre). (2) Seven were normal pregnant women in whom the blood was examined from a few days to four weeks before delivery. The average indican value among these was 1.46 mg. per litre, or below the average. (3) Twenty-one were normal puerperal women in whom the blood was examined on the first to third day after confinement. In only four cases was there an indican value of 3.2 mg. per litre; in all the others it was below the normal. There was thus no evidence of a physiological excess of indican in the blood as maintained by Rubsämen. (4) Sixteen were cases of albuminuria and imminent or actual eclampsia. The indican value in these cases was mostly above the physiological quantity, but in only two was it above the upper limit of the normal. No connexion was found between the amount of indican in the blood on the one hand, and the quantity of albumin in the urine, the height of the blood pressure, and the number of eclamptic attacks on the other. The average indican value in this group was 1.89 mg. per litre. (5) Three were cases of other pregnancy intoxications—namely, dermatosis gravidarum, pernicious vomiting, and osteomalacia. In the first two cases the indican value was below the normal and in the third above it (3.2 mg. per litre). (6) Eight were puerperal cases with albuminuria or eclampsia. None of these patients had indican values above the upper limits of the normal and half had a physiological indicanaemia.

478. Radium Treatment of Cervical Carcinoma.

E. VILLARD and L. MICHON (*Lyon Méd.*, February 15th, 1925, p. 181) conclude that in the present state of knowledge it is unjustifiable to supersede surgical treatment by radium. Radium therapy, they remark, still requires further investigation, and does not yet justify dogmatic statements. The advantages of choosing radium rather than surgical treatment are that it has a selective action on the neoplastic cell, a negligible mortality, and a relatively simple technique. Its disadvantages, they state, are that—(1) the absorption of necrotic tissue may cause grave toxic symptoms; (2) distant metastases may be stimulated; (3) certain normal tissue cells, especially those of the intestine, are not indifferent to radium emanations, and may be adversely affected; (4) the technique of the applications is as yet insufficiently established, and the present-day advocacy of large doses may be regarded as evidence that the good results formerly described were in some cases deceptive; (5) in a certain number of cases fistulas, phlebitis, or severe pain follow the treatment. Surgical treatment removes diseased tissues, instead of involving their resorption. It permits extirpation of metastases which are too distant to be dealt with by radium applications; the mortality is diminishing steadily, especially with the use of the Mikulicz drain. The authors add that statistical comparisons are apt to be fallacious, but if all but five-year cases be excluded the best results described (13 to 21 per cent. of cures) after radium treatment are inferior to those of surgical treatment (26 per cent. and upwards). They hold that at present all operable cases should be treated surgically, but state that when the limits of the cervical neoplasm cannot easily be passed in surgical extirpation radium is preferable to all other modes of treatment.

479. Bartholinitis during Pregnancy.

COMMANDEUR and GAUCHERAND (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, 1925, 2, p. 174) adduce evidence that the prognosis of suppuration in Bartholin's gland during pregnancy is less grave than has sometimes been asserted, with respect to the risks of abortion, premature labour, or post-partum infection. Out of 14 patients with bartholinitis, of whom the oldest was aged 28, the tumour was incised in 9, and drained in the early or late months of gestation. Labour occurred at term in all cases. Neither in these patients nor in three in whom the inflammatory swelling ruptured during delivery were any grave febrile sequelae noted. Nevertheless the authors warn against attempting extirpation rather than incision of the gland during pregnancy, and concede that operative or manipulative interference with delivery may increase the risk of infection after labour.

Pathology.

480. Cytological Changes in Incubated Blood.

BY incubating hanging drops of blood taken by a paraffined pipette either from the heart or from the peripheral circulation MARGARET R. LEWIS (*Amer. Journ. Path.*, January, 1925, p. 91) observed the transformation and growth of the leucocytes into macrophages, epithelioid cells, and giant cells in chick, mammalian, and human blood. So far as could be determined by following the cells in the incubated drops of blood, it seemed to the author that it was the mononuclear type that gave rise to the three kinds of transformed cells; granulocytes were not observed to become transformed. In every kind of blood examined there developed first a large wandering cell, several times larger than any of the normal leucocytes, which was phagocytic for red blood cells, melanin granules, carbon particles, dead granulocytes, and tubercle bacilli. Somewhat later there appeared a cell more like a primitive mesenchyme cell, and still later the epithelioid cell was formed. This cell was sometimes binucleate, and in some instances typical multinucleated giant cells (Langhans's giant cells) were formed. The author stresses the importance of the fact that there could be no possibility of participation in this phenomenon by the endothelium or the connective tissue. The hanging drops of human blood were made from blood taken from the finger. These were usually injured by contact with the glass, and while the cells often lived for two or three days and displayed the beginning of the transformation, they more frequently died before the formation of an epithelioid type of cell, unless the cover-glass was coated with some substance more favourable for their development. The best results were obtained by coating the covers with colloidin. In some of these cultures of human blood the white blood cells lived for twenty days; in a few they lived nearly four weeks.

481. Carbohydrate Metabolism in the Placenta.

K. V. OETTINGEN (*Zentralbl. f. Gynäk.*, March 21st, 1925, p. 625) has found, in common with Liepmann, that if fresh placenta be perfused with 1 per cent. dextrose solution about one-quarter of the sugar disappears from the perfusing fluid. Since, however, the glycogen of the placenta does not become increased, and since the sugar undergoes a similar diminution during perfusion through a chemically poisoned placenta, it is concluded that the sugar is retained in the oedematous organ, and that the placenta possesses no special property of splitting the sugar molecule or of manufacturing glycogen. In another series of experiments insulin was added to the perfusing dextrose solution. The sugar was then found to be increased up to 10 per cent. This increase did not occur if the vital activity of the placenta had been destroyed and was not accompanied by a diminution of the placental glycogen. It is concluded that insulin possesses the property of increasing sugar katabolism in living tissues.

482. Urine Examination in Renal Tuberculosis.

R. GRANDINEAU (*Rev. Méd. de l'Est*, November, 1924, p. 726) contributes the results of urine examinations in a series of cases of renal tuberculosis. The method used was that of Ellermann and Erlandsen—namely, centrifuging, diluting the sediment with sodium carbonate, incubation for twenty-four hours at 37° C., centrifuging again, dilution of the sediment with sodium carbonate, boiling for a few minutes in a water-bath, centrifuging, fixing and staining a small drop of the sediment according to Spengler's method, prolonged treatment with Giehl's stain being necessary. These preliminary measures are recompensed by the rapidity with which tubercle bacilli may be found on the slides. Examinations were made of bladder or kidney specimens, or both, kidney specimens being obtained when catheterizing of a ureter was necessitated. Catheter specimens were obtained when possible from the bladder, after careful cleansing of the meatus and the urethra to avoid contamination with the smegma bacillus. In cases where the bladder was irritable specimens passed in the ordinary way were collected during a period of several hours. Grandineau's cases fell into two groups: (1) Cases of calculus, hydronephrosis, etc., no clinical signs of renal tuberculosis being present. The organism was never found in these cases. (2) Definite cases of renal tuberculosis. Examination of bladder specimens alone gave 65 per cent. positive results; combined examination of bladder and kidney specimens resulted in 76 per cent. positive results. The author maintains that the direct examination of the urine for the tubercle bacillus in suspected renal tuberculosis should be a matter of routine, as it is in the case of the sputum in pulmonary disease.