AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

1. Diseases of the Heart.

HUCHARD (*Journ. des Prat.*, August 24th, 1907) points out many mistakes which are made during the clinical investigation of and the treatment of patients suffering from diseases of the heart. He points out that far too much importance is attributed to physical signs and too little to functional troubles; valvular diseases are studied according to their anatomical situation, instead of according to their endocardial or arterial origin; the "central" heart is studied and the "peripheral" heart, as represented by the vascular system, is almost entirely neglected. Other errors are the non-recognition of the factor of alimentary intoxication as an important cause of the dyspnoea of heart disease; the failure to distinguish the various forms of angina and an ignorance of the clinical characters of aneurysmal neuralgia. Dyspnoea occurring in patients with heart disease is frequently considered to be uraemic in nature, whilst really being due to an alimentary intoxication, as is proved by the fact that suppression of meat and the institution of a milk diet will cause a disappearance of the dyspnoea, whilst a return to a meat diet will cause this symptom to return. The author has never known a systole to result directly from emphysema or asthma, as is generally stated in textbooks. He states that a systole only occurs in emphysematous asthmatical patients when they have developed arterio-sclerosis. Patients from 45 to 60 years of age sometimes become "asthmatical" (?). Most of these "late asthmas" are really the result of arterio-sclerosis or are due to alimentary intoxication. The author points out that as true asthma can be modified very considerably by alimentary régime, it is necessary in treating a patient with this disease not only to prescribe iodide of potassium, but also to enforce a carefully-regulated dietetic régime. He denies that affections of the digestive tube can ever of themselves give rise to dilatation of the right side of the heart and to asystole, as has been stated by Potain. The so-called "cardiac" epilepsy does not exist; the association of heart disease and epilepsy in the same patient is accidental only. Reduplication of the second sound of the heart, which is said to occur physiologically in connexion with the respiratory movements, is, according to the author, always pathological. Functional insufficiency of the aortic or mitral valves may really occur, although doubted by some, but only when there exists some defect in the myocardium. The most important factor which separates coronary angina from other forms, is that in the former there is an ischaemia of the myocardium; this is proved by the fact that patients suffering from true angina pectoris die generally from syncope. The so-called gouty, diabetic and tabetic anginas do not depend directly on the several constitutional states, and do not yield to treatment adopted for those conditions; the terms are therefore misleading. With regard to the disputed point as to the danger attached to women suffering from mitral stenosis who marry, the author considers that these patients may be allowed to marry, to become pregnant, and to suckle their children. An exaggerated tortuosity and increased tension of the walls of the temporal artery does not by any means indicate commencing or existing arterio-sclerosis, as is commonly supposed. Death from aneurysm is by many considered to be usually from rupture of the sac; in his researches on the cause of death in aortic aneurysm, however, the author finds this mode of termination far from common. Death may occur slowly, from asystole with compression of the auricles; from inanition due to pressure on the oesophagus; from pulmonary tuberculosis, favoured by pressure on the pulmonary artery and vagus nerves, and from a form of arterial cachexia; suddenly, from haemorrhage and syncope; from angina pectoris; from laryngeal spasm; from compression of the air passages; from rupture of the sac into the lungs, bronchi, or trachea, pericardium, pleura, or spinal canal, or by embolism, etc. Another cause of sudden death in aortic aneurysm is a subacute anaemia. In heart disease pleural effusion occurs especially on the right side, due chiefly to the fact that pulmonary embolism is most frequent on the right side, and to the fact that a perihepatitis may extend upwards into the corresponding pleura; this effusion is latent, without inflammatory reaction, and almost always without dyspnoea, and, unless carefully watched for, may be entirely missed.

2. The Millard-Gubler Syndrome.

G. PIERACCINI (*Riv. Crit. di Clin. Med.*, Florence, 1907, p. 509) describes a case of the Millard-Gubler syndrome, which consists in a crossed paralysis, of the face on one side and of the body on the other. The patient, a previously healthy stoker of 63, who had never had syphilis, first noted involuntary irregular movements of his right leg on August 3rd; these increased till on August 7th he had to give up work. On the 11th he was admitted to the hospital with right hemichorea; the eyes, pupils, face, tongue, and palate were normal, and there was no dysphagia, dysarthria, or dyspnoea. All the muscles of the right side of the body, from the sterno-mastoid downwards, were twitching and jerking in the most varied, irregular, and inco-ordinate manner, often very violently. The patient could stand upright and never fell; he walked about much, fairly well, and found that the choreic movements worried him less when he walked. The movements ceased entirely during sleep; there was no spasm and no loss of muscular power. Sensation and the special senses were unaltered, as were the mental faculties; some redness and excoriations, the effect of the choreic movements, were seen on the right side. The movements became even more violent a few days later, producing articular noises audible at a distance. About the end of August the right sterno-clavicular articulation was found to be dislocated. Slight fever and insomnia were noted, but no evidence of visceral disease could be found. On the 25th, the power of closing the left eye was impaired, and two days later complete paralysis of the left facial nerve, of the peripheral type, was observed; the other cranial nerves were examined carefully and were found to be normal. The general condition of the patient grew worse; early in September high fever and scanty expectoration (free from tubercle bacilli) appeared, with signs of involvement of the left lung. The right-sided clonic movements grew less and finally disappeared, while the patient died on September 17th, after a long period of coma. At the autopsy confluent miliary tuberculosis of the left lung was observed, and a tuberculous nodule, the size of a pea, was found in the medulla between the left-hand lower edge of the pons above and the upper extremities of the left anterior pyramid and left olive below, pressing externally on the origin of the left facial nerve. The meninges of the rest of the brain were examined carefully, but no further tuberculous deposit could be discovered. Pieraccini points out that the chief interest of this case lies in the fact that the single and definite medullary lesion described above was able to produce a typical and protracted hemichorea. It also confirms the view of Kahler and of Pick, that chorea may be set up by irritation of the pyramidal fibres at any point in their course.

3. Syphilitic Hepatitis.

G. BRECCIA (*Riv. Crit. di Clin. Med.*, Florence, 1907, pp. 665, 692) has collected from the pathological literature nine forms of hepatic syphilis, which he briefly descusses. Some of these are associated with fever, and he adds 5 cases of his own in which he diagnosed febrile syphilitic hepatitis. He notes that the fever may be either continuous, intermittent, remittent or irregular, and is generally of short duration only. He concludes that syphilis should be thought of in patients presenting several of the following signs and symptoms: Enlarged liver, with or without splenomegaly; gastro-intestinal disturbances, anaemia without leucaemia or leucocytosis, jaundice, enlarged lymphatic glands, osteocopic pains, general and progressive debility, intermittent or remittent fever. Of course a history of syphilitic infection or congenital syphilis is very suggestive in such cases. In one of his cases that died the spleen was enlarged and very fibrous; while the liver was much enlarged, smooth, hard, and showed marked parenchymatous degeneration with but little increase in the fibrous tissue. Numerous references to the literature are given.

4. Certain Eye Symptoms in Epileptics.

BEATOS (*Il Morgagni*, Oct., 1907) discusses the Cl. Bernard-Horner symptom in epilepsy. This is characterized by

pupillary myosis with conjunctival injection, narrowing of the palpebral fissure, and apparent diminution in the size of the globe of the eye. A study of the condition showed that in many cases it was more apparent than real, and was associated with paretic signs in the other eye. The author found that in many epileptics there existed a lessened functional activity in one palpebral orbicularis, as shown by an inability to close the one eye alone; sometimes there was also a greater fullness in the palpebral fissure on the same side. Usually this was associated with evidence of diminished functional activity in the corresponding half of the body (exceptionally the paretic condition was "crossed"). In either case there was a close correspondence with what one sees in undoubted cerebral lesions (hemiplegia). Pupillary asymmetry is fairly common in epileptics; generally the pupil is larger on the side of least functional activity. The increased size of the pupil and of the palpebral fissure in one eye is sometimes associated with the Cl. Bernard-Horner triad of symptoms in the other eye. The ocular phenomena shared by the other tend to co-ordinate epilepsy with cases presenting cerebral changes.

SURGERY.

5. The Treatment of Tuberculous Coxitis.

IN a clinical lecture, A. HOFFA (*Deut. med. Woch.*, Nos. 10 and 11, 1907) compares the surgical and conservative treatment of tuberculous hip-joint disease, and gives his opinion as to the methods of carrying out the latter, and the indications for the former. Speaking broadly, he says that tuberculous coxitis in childhood should at first be treated conservatively, while when the disease attacks persons over 20 years of age, resection should be performed. The hip joint of children has a marked tendency to heal up spontaneously, as can be recognized in cases of country people who have got over severe hip disease in childhood without any medical treatment. In adult life, on the other hand, the disease offers a bad prognosis, and it is generally found that the hip joint is not the only tuberculous focus in the body. In childhood the majority of the cases can be cured—that is, the disease can be arrested and the focus encapsuled, or the whole focus can be removed. In quoting the various results obtained in different clinics, he lays greatest stress on the statistics of the Tuebingen clinic, where 321 cases were treated. Of these 55.7 per cent. were cured; 76 per cent. of the cases without suppuration were cured, while only 41 per cent. of the suppurating cases did well; 40 per cent. of the patients died. The fatal cases consist of 22.5 per cent. of the non-suppurating and 52.0 per cent. of the suppurating cases. While suppuration is thus shown to be a bad prognostic sign, he does not regard the presence of an abscess as an indication for operation. As long as one is not tempted to open subcutaneous abscesses by large incisions, one can hope to cure the suppurating cases. Cold tuberculous abscesses, unlike acute abscesses, should not be incised; this always leads to the formation of a fistula, and, the door being open for septic infection, renders the prognosis much worse. Neither does he regard the presence of a simple localized focus in the bone as an indication for operation. When one watches such a focus by Roentgen rays, one frequently sees that the disease is not spreading, and after a while it commences to become encapsuled. Only when there is a distinct spreading of the focus should one perform resection. In carrying out a conservative treatment, he says that when the coxitis is treated early, when the *x* rays show that the process is limited to the synovial membrane, one may aim at obtaining a movable joint, and one will mostly be successful. When, however, the joint is partly or wholly undergoing a destructive process, and whenever there is an abscess in the joint, no attempt may be made to obtain a movable joint; one should then do all one can to get ankylosis. The ankylosis should be obtained in a position of slight abduction and extension. Shortening cannot be altogether avoided when the articular surfaces of the bones have been destroyed. The actual treatment consists in attending to the child's general health in the first place and treating him locally in the second place. There is no doubt that hygienic measures are of the utmost importance in the treatment, and light, air, good nursing, and good feeding each claim a place. Seaside, woodland, or mountain air all have their advantages. Cod-liver oil, Scott's emulsion, arsenic, and iodide of potassium all do good. When the parents of the children are syphilitic a soap inunction course can be highly recommended. Lastly, he states that he has obtained excellent results in recent times by employing Marmorek's antituberculous serum per rectum. Turning to the question of local treatment, he finds that the three cardinal points which require attention are absolute fixation of the joint, slight but distinct distraction of the articular surfaces, and, thirdly, removing all pressure in the joint as long as the inflammation is acute. The first point in the treatment—that is, rendering the joint immobile—is only possible when combined with the second condition. Muscular spasm causes the articular surfaces to rub against each other, and the least movement causes pain, which in the long run causes the patient to lose flesh and strength. Slight tension on the joint acts antispasmodically. The best method of fixing and extending the joint is by means of plaster-of-paris. This, however, must be applied correctly if it is to be of any service. To do this the surgeon requires considerable skill. It is often necessary to correct contractures (adduction and flexion) before applying the plaster bandage. Various methods have been devised for applying the primary extension, most of which are reliable. He thinks that the apparatus devised by his old assistant Zander, which he always employs, possesses all the advantages of the older apparatus. He describes in great detail, illustrating the various points by diagrams, the correct method of applying the plaster bandage. This should grasp the pelvis, thigh, and leg, and especially be moulded to the tuber ischii and crests of the ilium. A glance at the diagrams will assist the reader to understand the special technical points. When plaster-of-paris is not used, special orthopaedic apparatus can be employed. These, too, require to be exactly adapted to the patient, and must be replaced by new ones after the lapse of a certain time, as the little patient will have grown out of the first one, and a badly fitting apparatus no longer serves its purpose. He prefers Hessin's and Dollinger's apparatus, especially the former. After the patient has worn the bandage or apparatus for about three years, it will be necessary to be very careful how he begins to use the limb. As long as there is the least muscular tension on applying cautious slight abduction, the bandage or apparatus may not be removed. When the parts are quite painless, he first allows the foot to be set free of the restraint. After about three months he applies an apparatus which allows of movements of the knee. The child is allowed to get about without a stick for another three months, and then this apparatus is replaced by a protective splint for the hip-joint, made of celluloid. At this time he believes that salt baths do much good. The transitional treatment often lasts for a year or longer. Abscesses he treats by puncture and removal of the pus and by injection of iodoform glycerine. This must at times be repeated. He finds it much the best plan to leave fistulae alone. Scraping and other operative procedures generally make them worse. Marmorek's serum has given him good results in many cases. He considers that the results obtained by conservative treatment are better than those obtained by resection from the point of view of function. However, resection has its distinct indications, and when it has to be carried out all the diseased tissue must be removed. He warns the reader against violent reduction of pathological dislocations, and contractures after the healing of the hip disease, as this often leads to a flaring up of the tuberculosis in the form of miliary tuberculosis, or even of the old local trouble.

6. Treatment of Fractured Patella.

SACCHI (*Arch. di Ortoped.*, An. 24, f. 1), with the view of expediting recovery in fractured patella, advises the following procedure. An incision is made longitudinally above the upper fragment so as to expose the junction of the quadriceps tendon with the patella, and a similar longitudinal incision is made over the lower fragment exposing the junction of the patellar ligament. A strong curved needle armed with about a yard of stout carefully sterilized silk is then passed through the upper incision behind the patella and out at the lower incision and the two fragments brought into apposition by this strong silk loop. The ends of the loop are finally fastened above the upper fragment and the two incisions sewn up. The limb is then bandaged and kept on an inclined plane. At the end of eight or ten days the sutures are removed and the patient is told to get about with crutches, and after a week massage and passive movements are practised. The operation is based on the experience of tendon resections in other parts, for example, tendo Achillis. It is the too prolonged rest in the ordinary treatment, with the associated disease of the quadriceps tendon, which, in the author's opinion, accounts for many of the discomforts and inconveniences following the usual treatment of fractured patella. By

uniting the severed tendon in the way he suggests, it is able to function much earlier, and by so doing helps in the absorption of blood and other extravasations following the injury. The silk suture does not give rise to the troubles which sometimes follow metallic sutures and does not interfere with the movements of the joint, as the internal part of the suture lays in the intercondyloid space where there is plenty of room for it and the external section is safely buried under the skin.

OBSTETRICS.

7. Pregnancy and Double Uterus.

CEALIC (*Monatssch. f. Geb. u. Gyn.*, October, 1907) states that within seven years 6 cases of labour at term where the uterus was double took place in the Bucharest Lying-In Institute. In all the six, however, the cervix was single; diagnosis by palpation was easy. The muscular coat of the cornua is usually defective in parts, and thus rarely contracts thoroughly; hence lingering labour, retained placenta, and *post-partum* haemorrhages are frequent. Axler (ibid.) admits that duplicity is often overlooked in parous women, and not discovered until after labour or death. Uterus bicornis and the less complete types of duplicity are the commonest malformations. Provided that the ovum can enter a uterine cavity, gestation to term may occur in any form of duplicity. Faulty presentations of the fetus are, however, frequent. When sepsis occurs it is usually due to infection of the cornu which is not the seat of the pregnancy.

8. Cyst of Hymen and Pregnancy.

KUNTZSCH (*Zentralbl. f. Gynäk.*, No. 45, 1907) reports a case of dyspareunia from vaginismus and a tumour obstructing the vulval cleft. The patient was 31 years of age and barren, but had only been married for two years. The periods were scanty and had recently appeared at intervals of about six weeks, previously the interval was not longer than a month. Coitus was very painful and had never been complete. Yet after an operation had been performed it was found that she was actually pregnant when it was undertaken. The pelvis was narrow, the vulval cleft lay abnormally backwards; there was a fissure at the attachment of the hymen. The border of the hymen was intact and its orifice occluded by a valve-like structure. The hymen was excised, and the resisting structure proved to be a cyst of the size of a plum; its anterior wall was the hymen itself; behind and above it involved the vagina. The uterus was examined after the removal of the cyst; the sound passed 3 in. into the cavity, and there was free mobility. The period had not been seen for six weeks. On the twelfth day after the operation the patient aborted, expelling an ovum of the size of a walnut, which contained a fetus 5 millimetres in length. The introitus was no longer sensitive.

GYNAECOLOGY.

9. Thrombosis and Embolism after Gynaecological Operations.

ZURHELLE (*Zentralbl. f. Gynäk.*, No. 43, 1907) recently reported the experience of the Gynaecological Clinic at Bonn. As elsewhere, the largest percentage of post-operative thromboses followed operations on myoma (2.75 per cent. at Bonn), the heart's action, etc., being often impaired before the operation by chronic anaemia, abuse of ergot, and mischievous expectant methods of treatment. Next to hysterectomy for fibroid and myomectomy, operations on malignant tumours where cachexia or ascites were present were the most frequently followed by thrombosis. The complications might be associated with other operations, such as oöphorectomy and fixation of the misplaced uterus, but not for any special reason. The general causes of thrombosis, rarely found singly, were sepsis, cardiac disease, chill during the operation, damage to blood vessels, circulatory disturbance from the anaesthetic, and post-operative influences such as disturbance to the circulation from tight bandages, tympanitic distension, and prolonged rest on the back. Zurhelle found that women of the upper classes were much more liable than the poor to post-operative thrombosis. In the discussion on Zurhelle's report there was much difference of opinion as to how long the patient should be kept in bed. Fritsch, like Witzel, and several Americans, as well as Krönig and Zurhelle, believed that there was less chance of thrombosis and embolism if the patient were made to get up on the third or fourth day. Tuszkay and Leopold were of the opposite opinion. Fritsch pointed out the dangers of chill during aseptic preliminary measures, and during abdominal sections where very long parietal incisions were made. Weak subjects also required free injections of fluid by enema or subcutaneously. Lastly, in order to diminish the risks of thrombosis, weakly women should be subjected to careful preliminary dieting whenever their case was not urgent. Strophanthus and subcutaneous saline infusions were of service.

10. Fetus Included in a Fibroma.

AT the July meeting of the Medical and Surgical Society of Bordeaux (*Gaz. Hebd. des Sci. Méd.*, October 20th, 1907), Courtin showed a uterus jus removed by him, presenting the condition of general fibroma with the inclusion of a fetus. The operation was subtotal hysterectomy, and the tumour, cut open from before backwards, was found to contain the remains of the cervical canal abutting on a small cavity, in which was an embryo about 5 weeks old. Fibrous tissue had taken the place of the normal parenchyma of the uterus, which was nowhere to be seen on the surface of the section. The patient, who was 37 years old, had had a child at the age of 19, with no abnormality about the birth, and had menstruated regularly until about a year before the operation, when, after the menses had been eight days overdue, she noticed an enlargement of the abdomen, and immediately afterwards was attacked with severe metrorrhagia, which had continued, more or less, until her admission into Courtin's clinic.

THERAPEUTICS.

11. Treatment of Leukaemia by X Rays.

U. DE LUCA (*Il Policlin.*, April, 1907) describes fully 8 cases of leukaemia treated by *x* rays, giving records of numerous blood counts and a history of the patients for a year or more after treatment came to an end. In all cases a tube of medium hardness was used, and the ordinary dose of the rays administered at one sitting was two of Holzknecht's units. The rays were usually directed to the enlarged spleen; occasionally also to the sternum and the ends of the long bones. In 2 cases the symptoms disappeared, the spleen and blood became normal, and the patients were under observation for some time without relapse. A man of 35 had suffered for a year from increasing debility, and for six months from pains in the bones. At the beginning of treatment his spleen extended beyond the umbilicus. His red corpuscle count was 5,000,000, white corpuscles 368,000, haemoglobin 89 per cent. He had some nucleated red corpuscles. There was slight albuminuria. Treatment was carried out daily for sixty-four days, then for a month every two or three days, and, after being omitted for two months, was applied at first twice and then once a week for another eight months. Fourteen blood counts are given, showing steady improvement, so that fifteen weeks after the beginning of treatment the spleen only reached the costal margin, the albumen had disappeared, the white corpuscles were 7,000, red corpuscles 6,700,000, haemoglobin 105 per cent. The strength was restored and no sign of disease remained. This condition lasted up to the last examination, a year after the establishment of apparent health. Another patient, aged 34, began to suffer from enlargement and displacement of the spleen and from general debility, which increased gradually for two years and eight months. Treatment was then applied over the spleen, sternum, knees, elbows, wrists, and ankles. For the first month it was carried out daily, then every two days, and then more rarely until the expiration of seven and a half months. Numerous blood counts show during that time a gradual improvement, the white corpuscles falling from 169,000 to 12,000, the red rising from 4,170,000 to 7,000,000, and the haemoglobin from 82 per cent. to 120 per cent. The spleen, which had occupied all the left side of the abdomen and part of the right side, returned to its normal size and position. The patient felt well and returned to hard work. During the next year he twice returned in apparent good health and underwent a short prophylactic course of *x*-ray treatment. Other cases were not equally satisfactory. One showed no improvement of any kind, but got steadily worse and died. Another, after long treatment, recovered his strength and returned to work with his spleen diminished in size, but still large, and leucocyte count 60,000. His subsequent history is unknown. The four other patients, after great improvement, and in some cases apparent cure and return to work, relapsed once or oftener, and finally died, in spite of treat-

ment. Other more recent cases are briefly referred to. In one patient leukaemia was succeeded by fatal pernicious anaemia. The author does not yet claim any of his cases as final cures, but considers that the *x* rays are capable of effecting an improvement beyond anything seen from other methods of treatment, and may, perhaps, ultimately prove to have cured some of the patients. He believes that the rays produce in the system bodies which counteract the leukaemic process, but that these bodies themselves give rise to antibodies which in some cases neutralize the favourable results of treatment and lead to a relapse. In this connexion he refers to his own work on the action of the blood serum of animals treated by *x* rays on animals suffering from an experimental leucocytosis.

12. Treatment of Gonorrhoeal Arthritis by Vaccines.

COLE AND MEAKINS (*Johns Hopkins Hosp. Bull.*, June-July, 1907) report in some detail 15 cases of gonorrhoeal arthritis which they studied throughout the entire course of the disease with a view to testing the value of treatment by vaccines and the control of their administration by means of the opsonic index. Of these, 11 were males, and in all the diagnosis was quite definite from the clinical course, the association of a genital infection, or the isolation of the gonococcus. The strains of gonococcus used in estimating the opsonic index were derived from two sources: a knee-joint in severe gonorrhoeal arthritis with effusion and a case of gonorrhoeal periostitis. Although the indices obtained with each of them in the same case were practically identical, it may be advisable where possible to use the organism isolated from the case under treatment. Blood agar was found to be the most satisfactory for isolation and continued cultivation, and the age of the culture should be between sixteen to twenty hours and not over twenty-four hours, since in older cultures numerous involution forms were present. The most suitable strength of the emulsion was found to be such that in normal serum an average of six to ten cocci per leucocyte is taken up. It appeared to make no distinct difference in the clinical results or in the effects upon the opsonic index whether the patient was vaccinated with a vaccine made from his or her own organism or whether a different vaccine was used. The strength of each vaccine was usually 600 millions to 1 c.cm. If the opsonic index was found to be below normal, an initial dose of 300 million gonococci was given, and subsequent vaccinations gradually increased up to 1,000 million at a dose. No ill effects resulted, but a slight local reaction, consisting of pain, tenderness, and redness at the site of injection, occurred twelve to twenty-four hours after the first dose. The change in the opsonic index varied in each case, but as a rule a sudden ascent, with gradual descent, followed the reaction. The number of vaccinations in individual cases varied from one to eight, according to the severity and chronicity, the intervals, which were controlled by the opsonic index, being generally from seven to ten days. While recovery may be complete under other forms of treatment, it was noted that in some cases progress was slow until vaccination was commenced, and vaccine treatment appeared to be of distinct value in the few cases observed. Although in this series other forms of treatment were omitted as far as possible, in order that the vaccine alone might be tested, there is no contraindication to its use in conjunction with any other suitable treatment. Considering that at present there are almost certain inaccuracies in opsonic technique, and that the evidence as to the rôle of opsonins in immunity is insufficient, it hardly seems advisable to persist in the estimation of the opsonic index for the control of vaccine administration. Apparently the danger of cumulative negative phases is not a real one, and we are justified in treating cases of gonorrhoeal arthritis by means of vaccine in doses of 500 to 1,000 million gonococci, administered every seven to ten days.

13. Immunization Against the Pneumococcus.

NICOLLE (*Ann. de l'Inst. Pasteur*, August, 1907) states that the bacteriolytic power which the filtrates of cultures of *Bacillus subtilis* exhibit towards the pneumococcus enables us to approach the problem of antipneumococcic vaccination in a new way. He mixes equal parts of a *subtilis* filtrate and a twenty-four hours' culture of the pneumococcus grown in peptone water with the addition of sugar. The tube containing the mixture is sealed, shaken up, and placed at a temperature of 40° C. The cultures, which are very abundant, generally become clear in a few hours, and on the following day are almost always found to be sterile when injected into animals in doses of from 20 to 40 c.cm. Exceptionally, some bacterial elements may have escaped bacteriolysis, and in consequence the rabbits will die sooner or later. But this accident may be avoided by filtering the pneumococcic solution, or, better still, by adding at the commencement of the experiment one drop of chloroform to every 10 c.cm. of the mixture. Nicolle's "pneumococcic solution," thus obtained, easily protects rabbits of from 2 to 2½ kilograms against the subcutaneous injection of 10 c.cm. of an ascitic bouillon culture of the pneumococcus—a dose which is fatal to the controls in twenty-four hours. With very rare exceptions 20 c.cm. of the protecting liquid is found to be a sufficient dose, but if one wishes to be absolutely certain of success the dose may be pushed to as much as 40 c.cm., the vaccine being perfectly free from injurious properties. The animal's resistance begins to manifest itself after the end of the third day and progressively increases on the succeeding days, from the fourth to the tenth. The immunity begins to decline about the third month. Side by side with the preceding method Nicolle made observations on the immunizing effect of equal doses of cultures heated to 58° C. for half an hour. He found that under these conditions the refractory state did not commence until after the sixth day, and was not fully established until after the eighth. Another disadvantage was that the cultures killed by heat were found to be toxic. Inoculation with the "pneumococcic solution" is therefore preferable, both because it is absolutely harmless and because it induces immunity more rapidly.

14. Action of Thiosinamin and Fibrolysin on Cicatrices.

LEONARDO (*Il Policlin.*, An. 14, f. 7, 8, and 10, 1907) says that thiosinamin is absolutely innocuous both in animals and in man, even in fairly high doses (10 to 15 cg. per injection). It is best given hypodermically, in children in a 5 per cent. solution in glycerine and water (5 cg. for the dose), and in adults in the form of fibrolysin (which contains 15 per cent. of thiosinamin). From experiments on dogs it does not appear that the drug has any direct influence on scar tissue, but by inducing leucocytosis it may modify the processes of filtration and diffusion about the scar. Possibly some chemical action may occur in the scar as the effect of thiosinamin, but no histological changes can be observed, nor has the drug any bactericidal or antiseptic power. The leucocytosis is marked (almost double what it was before injection), with a prevalence of neutrophile cells. Since the effects of thiosinamin are chiefly due to the leucocytosis induced, the use of nucleinic acid (which causes marked leucocytosis) is suggested, but the dose of this latter drug is so large and the injections so painful that practically thiosinamin serves the purpose better.

PATHOLOGY.

15. The Granuloma Trichophyticum of Majocchi.

IN 1883 Majocchi described the cutaneous lesions produced by infection with trichophyton. A further case is detailed by V. Chirivino (*Giorn. Internaz. d. Sci. Med.*, Naples, 1907, p. 433). The patient, a robust carpenter of 57, had had an eruption on the extensor surface of the lower fifth of the forearm for over three years. The patch was hairless, dark red in colour, composed of flattened nodules grouped together and separated by deep and sinuous interspaces. It was diagnosed as a gyrate syphilide, but showed no improvement after a five-months' course of mercury and iodide. The patient also applied linseed poultices to it. After this the more recent spreading edge of the patch reached to the flexor surface; here it took the form of flat, slightly-reddened soft nodules, covered with smooth, non-desquamating skin. It was observed that the man's finger nails were thickened, uneven, opaque, friable, yellowish-white in colour, and striated; onychomycosis trichophytica was diagnosed, and the eruption on the forearm was recognized to be trichophytic. Scrapings from the nails showed mycelium and spores; a biopsy was performed on the eruption, and the skin here showed considerable infiltration with round cells, proliferation of the connective tissue, epithelial cells, dilated blood vessels and lymphatics, and in their neighbourhood masses of trichophyton spores but no mycelium. The author also grew a white trichophyton colouring the culture-medium yellow from the skin. The patient disappeared for a year and came back nearly free from the granulomas, but with a tense atrophic scar in their place; spores were still to be found in the tissue. Chirivino thinks it is impossible to say whether such granulomas are due to a single variety of the trichophyton or not.