

EPITOME OF CURRENT MEDICAL LITERATURE.

Medicine.

47. Late Results of Treatment by Artificial Pneumothorax.

H. BJELKE (*Tidsskrift f. d. Norske Lægefor.*, November 1st, 1927, p. 1278) has investigated the after-histories of the 111 patients given artificial pneumothorax treatment at the Vensmoen public sanatorium during the past ten years. In 41 cases the disease was mainly of an exudative, progressive character, 5 of the patients belonging to the second and 36 to the third stage of the disease as classified by the Turban-Gerhardt system. Cavities were demonstrable in 31 of these 41 cases, and whereas 40 were sputum-positive on admission, only 29 were so on discharge. As many as 23 of these 41 were discharged as improved. On investigation, however, 36 were found to be dead, and among the 5 survivors there was only one who could claim as long an interval as three years between the treatment and the present investigation. The results were very different in the case of the remaining 70 patients, whose disease was mainly of a productive, chronic character. There were 36 in the second and 34 in the third stage of the disease. Cavities were demonstrable in 56, and tubercle bacilli were found in the sputum in 69 of these 70 cases. On discharge, only 18 of these 70 patients were still sputum-positive, and 65 were discharged as improved. The investigation of their after-histories showed that 58 were still alive, only 12 having died. During the ten years under review the choice of patients for this treatment underwent considerable modifications. During the first five years—that is, up to 1922—most of the patients suffered from severe disease of the exudative, progressive type. During the last five years the patients selected for treatment suffered as a class rather from the productive than from the exudative type of the disease; and of the 63 patients treated during this last five-year period as many as 53 were found to be fit for work when the present investigation was made, only one patient being unfit for work, and 9 having died. The author emphasizes the importance to their surroundings of patients being discharged from the sanatorium sputum-negative, and in this connexion he notes that, though as many as 109 of the 111 patients had tubercle bacilli in the sputum before a pneumothorax was induced, 62 left the sanatorium sputum-negative. There was no case of gas embolism in this series.

48. Watch-strap Dermatitis.

H. GOODMAN (*Urol. and Cutan. Rev.*, October, 1927, p. 648), who records an illustrative case, suggests that this condition is commoner than his experience or the reports he has seen would indicate, since cases of dermatitis among leather writers and tanners have been frequent. His patient was a woman, aged 24, who complained that for ten days she had been annoyed by a reddened area about the left wrist where she carried her watch. Although she had worn the strap for several months she had never been troubled before, and thought that the perspiration of a recent hot spell had caused the eruption. She removed the strap to the right wrist, on which she noted a similar redness and itching forty-eight hours later. On examination it was found that the lesions were limited to the forearm. Surrounding the left wrist was an area of erythema surmounted by closely crowded small vesicles. The part of the surface upon which the watch rested was least affected. Although the strap was only half an inch wide, the left forearm was erythematous half-way up to the elbow. The more recently exposed right wrist showed an area of erythema and vesicles more nearly that of the strap.

49. Causes of Blepharospasm.

O. ORLANDINI (*Giorn. med. d. Osp. Civ. di Venezia*, September-October, 1927, p. 140), who records two illustrative cases in sisters aged 22 and 16, states that the causes of blepharospasm consist in a direct or reflex irritation or stimulation of the facial nerve in its peripheral portion, in its passage to its nuclei of origin, or, lastly, in its cortical motor centre. The reflex causes of blepharospasm are chiefly irritation of the trigeminal nerve, and consist in ocular or periocular trauma or inflammation of the eyeball and its adnexa (keratitis, conjunctivitis, ulcers, iritis, blepharitis, dacryocystitis, and so on), or in pathological excitability of the sensory tracts, especially in trigeminal neuralgia. Blepharospasm is found in occipito-cervical neuralgia, which radiates to the trigeminal nerve, and in retinal hyperaesthesia due to disturbance of accommodation and errors of refraction. Lastly, the irritation may originate in a distant region, as in the case of children suffering from intestinal worms and in uterine disease.

Blepharospasm may be due to a direct cause, such as trauma in the region of the fascial nerve, compression by tumours, caries of the petrous bone from otitis, and parotid abscess. Infectious diseases and intoxications, such as syphilis, alcoholism, and malaria, may also give rise to motor disturbances in the orbicularis. The etiological factor may be found in tuberculous meningitis and diseases of the brain with irritation of the facial nerve by compression or a meningeal exudate. In other cases the origin of the blepharospasm cannot be determined, and therefore the motor disturbance is regarded as functional or dynamic. Blepharospasm is, in fact, ranked among the motor anomalies of neuroses and psychoses, such as epilepsy, chorea, and especially hysteria, in which it is usually found on both sides.

50. Chronic Visceral Polysteatosi.

M. COUTO (*Ann. de Méd.*, November, 1927, p. 449) describes a clinical complex, at first sight seemingly due to arterio-sclerosis, but differing from it in that it is not a sclerosis but a steatosis of the affected viscera. The condition is comparable with that found in yellow fever, which is an acute infectious polysteatosi, and in which the cells of all the organs are filled with fat droplets, their nuclei also being more or less attacked. The sole etiological factor in chronic polysteatosi is alcohol. The differential diagnosis between arterio-sclerosis and steatosis can be made by a careful examination. In both the heart is enlarged, but in the former the left side is chiefly involved, the precordial shock is strong and diffuse, the bruits are accentuated and the gallop bruit is frequently present, hypertension occurs, and the pulse is hard. In steatosis the right side is principally affected, the precordial shock is weak or absent, the cardiac sounds progressively lessen even to the extinction of one or the other, hypotension is present, and the pulse is soft. At the end of the disease the precordial shock becomes strong and diffuse and the bruits clearly perceptible, uraemic symptoms develop, and death occurs from cardiac insufficiency. In steatosis, emaciation due to pancreatic insufficiency and other causes, asthenia resulting from suprarenal insufficiency, delirium, vertigo, vomiting, oliguria, albuminuria, and cylindruria are present. The liver is always enlarged and palpable, and icterus is seen. An ophthalmic complex, the batrachophthalmus of Leitaõ, always occurs; this consists of a slight oedema of the eyelids, dull yellow sclerotics, and the arcus senilis. The lesions and symptoms may be more marked in some organs only; they are sometimes isolated, and occasionally combined, forming the various clinical types—cardiac, renal, and cardio-renal. While death usually ensues, recovery may occur, as in a case noted by Couto. Opinions differ as to whether the condition is a fatty infiltration or degeneration of the cells.

51. Oedematous Influenzal Laryngitis.

A. RIGAUD (*Thèse de Paris*, 1927, No. 107), who records five cases in patients aged from 23 to 36, including three hitherto unpublished, states that acute oedematous laryngitis in influenza, which was first described by Wolfenden (*JOURNAL*, 1890, vol. i, p. 541), may present all degrees of severity, its intensity ranging from a slight interference with respiration to asphyxia requiring tracheotomy. The general symptoms are very variable, the sole constant one being a high temperature. The diagnosis can only be made by exclusion of all other causes of laryngeal dyspnoea. Thus, in children, cases of acute dyspnoea must be excluded, such as laryngeal diphtheria, laryngismus stridulus, foreign bodies, and causes of chronic dyspnoea, such as congenital laryngeal stridor, papilloma of the larynx, cicatricial laryngeal stenosis, and hereditary syphilis of the larynx. In the adult it is necessary to eliminate acute causes such as Bright's disease, angioneurotic oedema, iodine inflammation, acute infectious diseases, cancer, gout, laryngeal paralysis, and crico-arytenoid arthritis, and chronic causes such as tumours and sclerema. There is no specific treatment, but palliative measures and intubation or tracheotomy must be employed as required.

52. Sex Differences in Pulmonary Tuberculosis Deaths.

P. PUTNAM (*Amer. Journ. of Hyg.*, November, 1927, p. 663) has made a statistical analysis of the mortality and population data of the U.S. Registration States of 1900 and the District of Columbia during the period 1870-1920, in order to determine the influence of sex on the death rate from pulmonary tuberculosis. For the first five years of life he finds a slight excess of male over female deaths. This is reversed at the

ages of 5 to 24 by a female excess, with the maximum between 10 and 14, when the proportion of female to male deaths is 100 to 39. The ratios swing back between the ages of 25 and 44, after which there is a marked excess in male deaths, reaching its maximum at the ages 45 to 54. The male prevalence persists till the age group 75 and over is reached, when the male and female death rates are approximately equal. The two most striking observations are the constant excess of female deaths during the 5 to 24 age groups throughout the fifty years examined, and the excess of male deaths during the 35 to 75 age groups. This excess has become far more evident during the last thirty years; for example, in 1880 the ratio of male to female death at ages 45 to 54 was 110 to 100, but in 1920 it had risen to 230 to 100. From a critical analysis of his data the author comes to the conclusion that sex differences at ages under 25 are due primarily to biological causes, related chiefly to physiological changes occurring during puberty and adolescence. The differences at ages 35 to 75, on the other hand, he ascribes to environmental causes, related to the greater wear and tear on the physiological resistance of men.

53. Syphilis and Marriage.

F. PINKUS (*Med. Klinik.*, November 18th, 1927, p. 1767) reports the case of a man infecting his young wife six years after he had contracted syphilis; he had no symptoms, nor had he received treatment, but nineteen years later he died from aortic and cardiac syphilis. Syphilis may remain dormant for years and then suddenly become active. Pinkus also reports the case of a man who was apparently cured by treatment but yet infected his wife, and subsequently, when actually cured, was reinfected by her. The author believes that these patients should not marry within five or six years after the date of infection, and in the meanwhile should have frequent Wassermann tests of both the blood and the cerebro-spinal fluid. Organic disease of the central nervous system is said to occur most frequently within six years of the date of infection. He adds that an untreated syphilitic woman may give birth to a congenitally syphilitic child twenty years after she was infected, and that it is probable that there is a larger percentage of untreated cases among women. When a woman has received adequate treatment she should not marry for seven years, and be kept under observation during that period. E. FINGER (*ibid.*, p. 1769) states that even after ten or twenty years a syphilitic patient may still be infectious, but he thinks that these patients may marry when four or five years have elapsed since infection, provided that they have had prolonged and energetic treatment every six months and that they have been entirely free from symptoms for two or three years. In women the period of observation should be extended to six or seven years. J. JADASSOHN (*ibid.*, p. 1770) thinks that a syphilitic man, in selected cases, may marry four years after infection, provided that he has been treated on the most modern lines, and that repeated examinations of the blood and cerebro-spinal fluid have been invariably negative for at least two years.

Surgery.

54. Wound Infection and Catgut.

F. L. MELENEY, F. B. HUMPHREYS, and L. CARP (*Surg., Gynecol. and Obstet.*, December, 1927, p. 775) report an unusual fatal operative wound infection yielding a pathogenic anaerobe of the gas gangrene group not hitherto described, and referable to catgut. A clostridium was obtained which differed culturally from the other known species associated with human gas gangrene—such as *C. welchii*, *C. oedematis maligni*, *C. novyi*, and *C. histolyticum*; it produced a true exotoxin not neutralizable by the antitoxins for any of the others, and the specific antitoxin was ineffective against any of their toxins. The occurrence within four days of four other fatal wound infections of the gas gangrene type in the same hospital led to an investigation of the theatre technique, and it was found that the chromic catgut in use at the time yielded on culture *C. novyi*, two strains of this newly described species, two different strains of haemolytic *C. welchii*, and two other non-pathogenic spore-forming organisms. Clinically the organism recovered produced a painful, brawny, red, oedematous swelling around the wound, with fever, leucocytosis, feeble rapid pulse, nausea, and profuse perspiration, and terminating in somnolence, prostration, and circulatory failure; it was highly pathogenic for the eight different species of laboratory animals tested. The authors point out that these findings call for the establishment by manufacturers of adequate aerobic and anaerobic methods for the absolute demonstration of sterility of all catgut put upon the market.

55. Primary Carcinoma of the Bronchi.

T. McCRAE, E. H. FUNK, and C. JACKSON (*Journ. Amer. Med. Assoc.*, October 1st, 1927, p. 1140) state that statistics show that malignant disease of the lung is increasing in frequency, though neoplasms originating in the lung parenchyma comprise only 10 to 15 per cent. of all lung tumours. The great majority start in the bronchi and subsequently invade the lung tissue. From an analysis of 90 cases reported by Weller, 128 cases collected from the literature, and 14 observed by themselves, the authors deduce certain clinical features of primary bronchial carcinoma. Approximately 91 per cent. of the patients were past the age of 35, and males predominated in the proportion of 4 to 1. In 40 per cent. the right side was involved, in 47 per cent. the left, in 9 per cent. both sides, while in 4 per cent. the site was undeterminable. The onset, usually insidious, may be sudden, with pulmonary haemorrhage, pain in the chest, or symptoms of acute bronchitis. Cough, presenting no special characteristic, was present in all the cases. The expectoration varied from a scanty mucoid fluid to a profuse, muco-purulent, fetid discharge. In some instances the sputum revealed fragments of tumour tissue, but the "currant jelly" sputum, said to be characteristic, was rarely encountered. Tubercle bacilli were never found unless tuberculosis was also present, and the absence of these has some diagnostic importance. Haemoptysis, a frequent and important symptom, usually appeared early in the disease, and varied from a mere streaking of the sputum to definite haemorrhage. Dyspnoea was common, and pain in the chest occurred frequently. In general, the early physical signs were those of bronchial obstruction; they became more intense as the obstruction increased. Weakness, loss of weight, and pyrexia were usually present, though the fever was largely dependent on the presence of an associated infection. The blood showed either a normal count or varying degrees of anaemia and leucocytosis. Metastases were found after death in about 66 per cent. of the cases, and the authors believe that bronchial carcinoma metastasis occurs late in the course of the disease. The malady must be distinguished from tuberculosis, foreign body in a bronchus, abscess, pressure on a bronchus from without, changes peripheral to the new growth, and cancer of the trachea. The surest and most essential method of diagnosis is bronchoscopy. These bronchial tumours appear to have a relatively low malignancy, and early diagnosis, followed by intensive x-ray therapy, may at least prolong life. The authors maintain that by bronchoscopy a positive diagnosis can almost always be made promptly, and that patients with obscure pulmonary and bronchial symptoms have a right to the benefits of this procedure.

56. Technique in Prostatectomy.

M. CHEVASSU (*Bull. et Mem. Soc. Nat. de Chir.*, November 26th, 1927, p. 1256) describes the methods he has adopted with considerable success in the operation of suprapubic prostatectomy; in a series of 27 cases he had uniformly successful results. He performs the operation in one stage whenever possible, and only uses the two-stage method in exceptional circumstances, for he considers it unnecessary to inflict two operations on any patient who is not in very poor condition. Moreover, removal of the prostate is much more difficult when the operation is performed in two stages. Chevassu states that the operation can be extremely rapidly performed, often in less than a minute. He uses ethyl chloride anaesthesia on a mask, which lasts for three minutes and is devoid of any risk. He never packs the cavity left after removal of the gland. Haemorrhage is controlled by flushing with hot water, but it is important that the cavity itself should be actually flushed; for this purpose he uses a special type of irrigator. The absence of packing is said to give the patient a better and more comfortable convalescence.

57. Peritonsillar Abscess.

KOWLER (*Rev. de Laryngol., d'Otol. et de Rhinol.*, November 15th, 1927, p. 652) considers that the collection of pus known as a peritonsillar abscess is wrongly named. He says that the abscess that occurs is always in the palate above the supratonsillar fossa. It forms in the space between the palatal ends of the palato-glossus and the palato-pharyngeus muscles which is normally filled with loose areolar tissue. The reason why the abscess is sometimes not discovered is that the knife is caused to enter the anterior pillar and explore the region behind. Although the anterior pillar is often red and bulging the pus is rarely found behind it, and it is significant that a collection of pus between the tonsil and the posterior pillar is of the rarest occurrence. In support of this the author cites two cases of Menzel where an abscess occurred more than a year after the complete removal of the tonsil, and on incision revealed no trace of tonsillar tissue. In another case an abscess of the palate occurred in two successive years, and after the second attack

the tonsils were completely removed. In the following year another abscess appeared and was incised; in the fourth year this was repeated. The author states that in cases of abscess in association with the tonsil the pus is always in the thickness of the palate, no matter where the swelling appears most prominent, and he advises that it should always be sought there.

58. Rectal Fistula in Tuberculosis.

W. A. FANSLER and C. K. PETER (*Minnesota Med.*, November, 1927, p. 699) believe that tuberculous patients have a tendency to rectal fistulae, which occur in 3 per cent. of all cases of this infection. Clinical examination alone will often be sufficient to establish the tuberculous nature of a fistula, but a number of apparently simple lesions are on closer study found to be tuberculous. The finding of tubercle bacilli in smears of pus from an unruptured abscess, or as the result of animal inoculation, and in sections of the diseased tissue, will confirm a diagnosis made on clinical grounds, but repeated sections may have to be cut in order to demonstrate the character of the lesions. The authors doubt whether a fistula is ever primarily tuberculous. The form of operative treatment recommended is the cautery alone or combined with dissection, depending on the needs of the case. The authors consider that operative intervention should be seriously considered in all cases of tuberculous fistulae.

59. Treatment of Liver Abscess.

E. BRESSOT (*Bull. et Mém. Soc. Chir. de Paris*, October 21st, 1927, p. 620) records his experiences in treating amoebic abscess of the liver by evacuation without drainage in a series of five cases. Local anaesthesia was used in four cases. The liver was exposed by one of the ordinary incisions and the abscess opened under full vision. The pus was examined at once, and during this time the abscess was evacuated by using a Potain's aspirator. The cavity, when emptied by the aspirator, was freely opened and swabbed; the walls were never curetted. The liver opening was then obliterated by careful suturing and the abdominal incision was closed in layers. The presence of amoebae in the pus did not influence the line of treatment, but emetine was given subsequently. The post-operative course in all cases was straightforward and the temperature fell quickly to normal; sometimes the temperature was raised the day after operation, but this was of no significance. In eight to fifteen days the wound was healed, contrasting favourably with the fifty to 120 days required for cases that were drained. The rapidity of the recovery and the excellent results obtained are thought to render this method superior to any other that may be employed.

60. Carcinomatous Degeneration of Rectal Adenomas.

F. C. YEOMANS (*Journ. Amer. Med. Assoc.*, September, 1927, p. 852) reports seven cases of rectal adenomata, in six of which adenocarcinoma developed. He concludes that although a solitary adenoma may exist for many years without becoming malignant, yet that it ought to be considered precancerous and be removed. The more sessile is the growth the greater is the tendency to malignant metamorphosis, and Yeomans thinks that the more frequent use of the proctosigmoidoscope would enable such tumours to be dealt with early and successfully. An accessible polypoid adenoma can usually be snared and cut off safely, but the more sessile growth requires wide excision of the base and cauterization or coagulation of the site of attachment. Solitary high pedunculated growths may sometimes be safely snared. When the tumour is sessile but removable it may already be malignant. Electric coagulation or radon implantation should be used as a safeguard against dissemination. High-lying sessile growths may have to be removed through an abdominal incision—a more dangerous procedure owing to the risk of peritoneal infection.

Therapeutics.

61. Treatment of Excessive Sweating.

W. CURTH (*Med. Welt*, November 12th, 1927, p. 1518) discusses the treatment of general and local hyperidrosis; the general type occurs in pneumonia, typhus fever, tuberculosis of the lung, Basedow's disease, brain tumours, and cachexia. Atropine, though very useful, has the disadvantage of arresting the salivary secretion, causing dryness of the mouth, and inciting cough in a way very distressing to the patient. Curth thinks it better, therefore, to employ agaricin, 1/30 gram, in pill form, every evening, or fluid extract of hydrastis, 25 to 30 drops three times a day. Arsenic given

for a long time in small doses is strongly recommended; an infusion of sage leaves, or a tincture of sage leaves, 20 drops three or four times a day, is also useful. All these remedies, with the exception of sage, seem to influence the sweat glands through their nerve supply. Daily baths at a temperature of 80° F. are advised, and friction with some alcoholic solution, eau-de-Cologne, lavender or thyme or menthol solutions 1/2 per cent. Adipose persons require some dusting powder; but a powder containing salicylic acid is contraindicated in lung diseases, since it irritates the organs of breathing. The powder most employed is salicylic acid 2 per cent., iris root 10 per cent., zinc oxide and bismuth subnitrate each 20 per cent., with talc powder to 100. For sweating and malodorous feet Curth recommends horsehair or straw movable inner soles to the shoes dusted with a 30 per cent. sodium bichlorate powder, as are the stockings or socks. The toes should be separated with cotton-wool, and the feet washed each evening with spirits of wine, eau-de-Cologne, or 2 per cent. salicylic acid in alcohol; afterwards they should be dusted with 3 per cent. salicylic acid mixed with equal parts of bismuth subnitrate and talc powder to 100. Painful fissures on the feet should be painted with 1 to 2 per cent. of silver nitrate before applying an unguent. For sweating in the axilla Curth recommends concentrated acetic acid 60 per cent., spirits of lavender and spirits of rosemary each 1 per cent., spirits of cloves 1/2 per cent., camphor 8 per cent., aromatic spirits of vinegar to 100. For clammy hands he also recommends a spirit solution, either 5 per cent. salicylic acid or the following: formic acid and chloral hydrate each 5 per cent., Peruvian balsam 1 per cent., dilute spirit to 100. For sweating of the head he recommends cold water douches and subsequent friction with spirits of ether 50 per cent., tincture of benzoin 7 1/2 per cent., and a few drops of vanilla, heliotrope, or oil of geranium; at night a salicylic powder may be used.

62. Indications for Synthalin in Diabetes.

A. H. A. MARTENS, C. H. KOERS, and C. DE JONG (*Nederl. Tijdschr. v. Geneesk.*, November 5th, 1927, p. 1918), who record 11 cases of diabetes in patients, aged from 14 to 71, treated with synthalin, summarize their conclusions as follows: (1) Synthalin reduces the amount of sugar in the blood as well as in the urine. (2) The use of synthalin may be of service not only in mild and moderate cases of diabetes but also in acidosis after or in association with a course of insulin treatment. (3) It is desirable to test the hepatic function before commencing synthalin treatment. (4) Increase of urobilin or urobilinogen hardly ever occurs after administration of synthalin. It cannot, therefore, be regarded as a contraindication for synthalin treatment. (5) A sequel of synthalin treatment to which no attention has been drawn is the frequent occurrence of loss of flesh. (6) The complications of synthalin treatment are usually of short duration and are no indication for the suspension of the treatment. The administration of fractional doses usually causes the symptoms to disappear. (7) Any chologogue has a good effect in causing disappearance of the symptoms. This supports the view that an efficiently functioning liver is the principal requisite for synthalin treatment. (8) The success of synthalin is not dependent on good gastric function, since synthalin treatment had a favourable effect in several patients with achlorhydria. (9) Treatment with synthalin requires special attention to each individual patient even more than insulin does.

63. Chemotherapy in Septicaemias.

E. VAUCHER and Mlle UHRIG (*Paris méd.*, December 3rd, 1927, p. 454) assert that some chemical products have given very good results in the treatment of infections, and they describe four in particular—trypaflavine, mercurochrome, septicemine, and optochine—and the conditions in which they have proved of benefit. Trypaflavine is a brownish-red powder, soluble in water, forming a yellow solution. This should be sterilized for one hour at 70°, and, as it is sensitive to light, should be kept in dark bottles or ampoules. It possesses a marked bactericidal action, and acts as a powerful disinfectant in the blood, serum not modifying its action. Trypaflavine is said to be only slightly toxic, and is usually administered in 2 per cent. solutions. Slight reactions, including a yellow coloration of the skin, without shock, follow the injections. Normally it is excreted in the urine in thirty-six to forty-eight hours. Indications for its use are septicæmias in general, septic endocarditis, all infections, and typhoid fever; it is contraindicated in acute hæmorrhagic or chronic nephritis. Mercurochrome, the sodium salt of dibromoxy-mercury-fluorescein, contains 26 per cent. of mercury, and is soluble in water, forming a cherry-red solution. It possesses great penetrating and bactericidal powers, and causes only slight irritation of the tissues. A 1 per cent. solution is usually injected intra-

venously, the dose being 5 mg. for each kilo of body weight; it causes rather marked reactions. The drug is eliminated in the urine and faeces. Mercurochrome has been used with benefit in many infections, as septicaemia, pneumonia, and scarlet fever, and as a wet dressing in cutaneous infections. Optochine or ethylhydrocupreine, a quinine derivative, is liable to cause aural and ophthalmic troubles, and its use needs careful supervision, but it has given good results in pneumococcal infections owing to its selective action on the pneumococcus. Septicemine contains 33 per cent. of iodine and 45 per cent. of formine; it is extremely diffusible, non-toxic, and strongly germicidal. The drug causes no reactions, and is eliminated by the kidneys. It is said to be indicated in all general infections, particularly the puerperal, in septicaemias, and in pyaemias. The authors discuss the combining of these drugs with vaccines and serums in the septicaemias due to streptococci, staphylococci, colon bacilli, pneumococci, and gonococci.

64. Treatment of Typhoid and Paratyphoid Fever with a Staphylococcal Vaccine.

V. BIE (*Ugeskrift for Laeger*, November 24th, 1927, p. 1072) has, since 1921, been treating typhoid and paratyphoid fever with vaccines. During the first two years a typhoid vaccine was given. Later a staphylococcal vaccine was used, as its action was equally effective and the treatment could be started at once on the strength of a clinical diagnosis without the subsequent serological diagnosis being rendered difficult by artificial changes in the Widal reaction. On five successive days intramuscular injections were given, the doses being 100, 200, 400, 700, and 1,000 million organisms. In the few cases in which this series of injections proved ineffective it was repeated after an interval of a few days. There was no more than a slight rise of temperature, and a rigor was observed in only one case. No patient collapsed under this treatment. The result was usually a fall of temperature by lysis during or directly after the injections. All the 51 cases of paratyphoid fever thus treated were severe. In 39 the result was good, the temperature falling during or directly after the injections; in 4 cases the fall of the temperature was slow, or the effect of the injections was doubtful, and in 8 cases the treatment seemed to have no effect. None of these 51 patients died. Of the 54 patients suffering from moderately severe, or severe, typhoid fever 35 responded satisfactorily to the treatment; its action was doubtful in 3 cases, and ineffective in 9; 7 of the patients died. Among the 47 who recovered there were as many as 13 who suffered from pneumonia. The author concludes that the pneumonia complicating typhoid fever is seldom affected by vaccine treatment, and that when this treatment fails to benefit a case of typhoid fever it is usually because the patient is also suffering from pneumonia. Uncomplicated typhoid fever usually reacts satisfactorily to intramuscular injections of a staphylococcal vaccine, and the disappointing results obtained by other workers may in many cases be traced to the fact that they gave the vaccine by the intravenous, and not by the intramuscular route.

65. Pepsin Solutions in Inoperable Prostatic Hypertrophy.

E. GRUNERT (*Zentralbl. f. Chir.*, December 3rd, 1927, p. 3088) confirms Payr's observations on the efficacy of injections of pepsin solutions in this condition, and he describes the case of a man in whom the pelvic floor was occupied by a non-inflammatory apparently malignant tumour. He gave three injections into the prostate of 10 c.cm. of a 2 per cent. pepsin solution, employing Payr's technique and allowing an interval of five days between each dose. The tumour contracted, and urination became normal. The patient, however, lost weight and died two years later. No necropsy was performed. Grunert suggests that this treatment might be of great value in affording relief in inoperable cases of prostatic hypertrophy or of malignant prostatic tumours.

66. Somnifen in States of Agitation.

W. MARTINEZ and F. J. RODRIGUEZ (*Rev. de neurol., psychiat., y med. leg. de Uruguay*, September, 1927, p. 2), who record ten illustrative cases of various forms of motor agitation treated by the soluble hypnotic somnifen (diethylallyl-barbiturate of diethylamine, came to the following conclusions. This drug, given intravenously in doses of 2½ to 4 c.cm., proved a powerful hypnotic in all cases of insomnia; it was also an effective sedative in motor irritability of alcoholic origin. It had absolutely no action on restlessness due to other causes such as manic-depressive psychosis, and it did not soothe the post-oncic states of depression or delirium even in alcoholic subjects. When given in the ordinary doses it was harmless provided that the blood urea did not exceed 50 cg. per litre and the cardiovascular system was healthy.

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Ophthalmology.

67. Hereditary and Familial Optic Atrophy.

R. FAVIER (*Thèse de Paris*, 1927, No. 439), who records two illustrative cases in brothers, maintains that this condition—first described in 1871 by Leber, who collected 55 cases—is not so rare as is supposed. Hormuth in 1900 obtained information about 74 families, which included 300 patients, of whom 131 submitted to medical examination. Other cases have since been reported by Klopfer, Buisson, Mathieu, and Heinsberger. In the great majority of cases the condition develops as retrobulbar neuritis, and appears to have no other cause but a familial and hereditary predisposition, being characterized not by its symptoms or ophthalmoscopic appearance, which resemble those of toxic amblyopia, but by its peculiar course. It rarely appears before the age of 12 or 13, nor after 30, except in women, in whom it develops between 41 and 49, about the time of the menopause. The youngest patient hitherto seen was a child aged 6 years, and the oldest were aged 52 and 67. Prodromal symptoms are exceptional. Visual disturbance occurs suddenly and develops rapidly in the course of the following four or five weeks, when it becomes more or less stationary. Sometimes the course of the disease is slower, lasting six to twelve months, or it may be rapid, producing almost complete blindness in a few days. Such cases, however, are exceptional. The affection is always bilateral, although both eyes are not always affected to the same extent or at the same time. The results of ophthalmoscopic examination vary according to the stage of the disease when it is made. During the progressive period comparatively little is to be seen; later, however, signs of partial atrophy develop. General disturbance may occur in the form of migraine, vertigo, vomiting, and sometimes epileptic attacks. The prognosis should be guarded, though it is not invariably hopeless. All treatment has hitherto proved ineffective.

68. Arterial Spasm and Occlusion of Branches of the Retinal Artery.

H. P. WAGENER and J. F. GIPNER (*Amer. Journ. Ophthalmol.*, September, 1927, p. 650) describe five cases of spasm of a branch of the retinal artery. In two of the cases the affected branch was completely obliterated beyond a certain point and quite invisible. While under observation the artery opened up, refilled with three progressive pulses, and became normal, vision being completely restored. In both patients early signs of hypertension were noted, and in one symptoms of the Raynaud type had been detected. This patient complained of occasional short periods of blindness on various occasions over a period of years and involving part of the visual field. In the other cases there was permanent loss of vision, and on examination the affected artery appeared as a white cord. The authors consider that in these cases thrombosis of the blood occurred at the time of the arterial spasm or immediately following it.

69. Bilateral Pre-papillary Vascular Loop.

A. M. YUDKIN (*Arch. Ophthalmol.*, September, 1927, p. 474) describes a case of bilateral pre-papillary loop of the retinal artery. In both eyes the central artery of the retina divided on the disc into two main branches. From the lower a spiral loop protruded into the vitreous, took a sharp turn, and returned to the upper temporal edge of the disc after making three spiral coils. The other vessels were normal. The slit-lamp examination revealed no remnants of the hyaloid arterial system. These phenomena have been reported from time to time, but it is very rare for the condition to be identical or even present in both eyes. With regard to the etiology, it is now held that the condition has nothing to do with either an inflammatory process or with the embryonic remains of the hyaloid artery, but is rather an excessive development with exaggerated tortuosity of the normal arterial system.

Obstetrics and Gynaecology.

70. Blood Transfusion in Obstetrics.

In order to obviate the use of stabilized blood in bulk with its contained anticoagulants (such as sodium citrate), which are toxic in large doses, LÉVY-SOLAL and A. TZANCK (*Presse Méd.*, December 10th, 1927, p. 1505) have designed a simple apparatus by means of which a number of donors may be successively utilized at the one operation. The authors report twenty-six obstetrical and gynaecological cases in which this procedure was most beneficial and no fatalities occurred. These cases included post-partum haemorrhages, abortions complicated with haemorrhage, obstetrical shock, placenta praevia, acute

anaemias of the pernicious type, and extrauterine pregnancies, in some of them artificial serum had been employed without benefit. The authors emphasize the importance of choosing the right moment for transfusion, and state that in all varieties of severe haemorrhage there are three distinct phases: (1) the stage of tolerance, in which the symptoms are not very apparent; (2) the phase of critical threshold, marked by an abrupt or progressive falling of the general state; and (3) the phase of asthenia or collapse, characterized by an imperceptible pulse and an absence of arterial tension. Preparations for the transfusion should be made on the first appearance of disquieting symptoms, and the operation be performed when progressive acceleration of the pulse and respiration occur. A description of the technique is given, whereby large amounts of pure blood can be transfused with the maximum of control and safety. As much as two litres may be necessary, and the authors' rule is to inject as much blood as has been lost. Their twenty-six cases included six of profuse bleeding during labour, seven of haemorrhage after abortion, three of shock following loss of a moderate amount of blood, three of placenta praevia, two of severe anaemia in pregnancy, and five of extrauterine gestation.

71. Insulin in Gynaecological Conditions.

ACCORDING to E. VOGT (*Zentralbl. f. Gynäk.*, November 25th, 1927, p. 3034) insulin exercises important influences on the activity of the endocrine glands, especially the ovaries. Injections of insulin have been found by Vogt to be effective in treatment of certain cases of "ovariogenous bleeding"—that is, cases of menorrhagia or metrorrhagia attributable, in the absence of morbid uterine conditions, to ovarian dysfunction. Moderate doses given twice daily before the morning and evening meals are recommended, and are said to be effective usually within two or three days. In two cases of wasting without discoverable organic disease a course of insulin injections in small doses led not only to a large gain in weight but also to a return of the menses. The first patient, a nullipara aged 36, had lost 40 lb. in weight and had had amenorrhoea during six months; she regained her lost weight with seventy-two days' insulin treatment and began to menstruate regularly. The second patient, an unmarried woman aged 23, in seven weeks regained 11 lb. in weight and menstruated for the first time for two years. Further evidence pointing to a connexion between insulin and the ovary is perhaps found in successful insulin therapy of hyperemesis gravidarum, which has been regarded as a consequence of ovarian hypofunction, and which in the experience of certain observers has been favourably influenced by injection of ovarian extract. Sterilization of female animals by injections of insulin has been accomplished by Vogt and others; injections or implantations of ovarian extract or substance from gravid animals had the same effect. Vogt finds that the effect of insulin given to non-diabetic females shows a constant variation with the menstrual cycle. The maximum diminution of the blood sugar was obtained during the last eight days before menstruation and during menstruation; after this period the effect of insulin became rapidly less, and remained at a minimum level throughout the first half of the intermenstrum. These findings, which have an obvious practical importance in the treatment of female non-diabetics by insulin, are compared with those of Frank and of Fels, who determined that the concentration of ovarian hormone in the blood was at its highest ten days before menstruation and remained at a very low level during the first ten days of the intermenstrum: apparently the ovarian hormone content of the blood and insulin sensibility take parallel courses in the menstrual cycle. During the latter half of pregnancy Vogt has found that the insulin sensibility remains high but constant; Frank found that the ovarian hormone in the blood from the fourth month of pregnancy onwards remained permanently at the level of twice the amount present before menstruation. He adds that with increasing knowledge of the action of insulin it becomes more evident that its action is not specific, but is complex, pluripotent, and related to that of ductless glands other than the pancreas.

72. Puerperal Septicaemia caused by *B. perfringens*.

R. PALAZZO (*Rev. Sud-Amer. de endocrinol., immunol. y quimioter.*, October, 1927, p. 775), who records an illustrative case following criminal abortion, states that though puerperal septicaemia has formed the subject of numerous communications, especially in France and Germany, it has not received the attention it deserves, as it is much more frequent than is supposed. Puerperal infection with development of gas in the uterine wall during life was described by Dohrn in 1872 before the anaerobic flora were known, but the nature of the process remained obscure, and it was not until 1900 that Halbann in Vienna made the first bacteriological study of gangrene of the uterus, in which he found Fraenkel's bacillus during life and gave the name of "septic emphysema of the uterus" to the condition. The most important studies have

since been made by Schottmüller (1910), Fraenkel (1924), Nürnberger (1925), and Lehmann (1926) in Germany, Brindeau and Macé (1900), Balard (1918), and Teissier, Rivalier, and Theiral (1926) in France, and H. Thorn in England. According to Nürnberger this infection is commonest in cases of criminal abortion. The characteristic symptomatic triad due to an intense destruction of the red corpuscles consists in a yellowish-green coloration of the skin and sclerotics, changes in colour of the urine, which is at first yellowish red, then dark, and finally black, and dark red coloration of the blood serum. Spectroscopic examination shows the presence of methaemoglobin. The prognosis is bad, death being due to destruction of haemoglobin and endogenous asphyxia. The absorption of toxic products due to disintegration of the tissues may hasten the fatal termination.

73. Surgical Intervention in Pelvic Infections.

A. H. CURTIS (*Journ. Amer. Med. Assoc.*, October 8th, 1927, p. 1191) discusses gynaecological problems and their treatment. He finds that in chronic leucorrhoea Skene's duct is as important a source of discharge as the uterine cervix and needs as much treatment. In chronic endocervicitis the establishment of thorough drainage is of great importance. He stresses the danger of repeated instrumentation of the uterus and also maintains that supravaginal hysterectomy performed even several days after diagnostic curetting is not an aseptic surgical procedure. In acute inflammation of the tubes operative treatment should be avoided. Curtis holds that a quiescent tubal infection is a self-limited disease, and that an operation is to be avoided except in the case of sequelae. With regard to diseased ovaries he thinks that less radical surgery is required in gonococcal cases than in those of tuberculous or streptococcal origin.

74. Serological Diagnosis of the Puerperium.

C. LIPPERA (*Il Policlinico, Sez. Prat.*, November 14th, 1927, p. 1655) has tested the medico-legal value of serological examination in a number of puerperal women. It has been suggested that in the puerperium some milk passes into the blood and, acting as a heterogeneous protein, excites the formation of agglutinins, which in their turn will cause agglutination when mixed with prepared serum. The author found that with two exceptions the test was positive up to eleven months after parturition. It was found positive in a woman who brought forth a macerated foetus at seven months and in a woman eight months pregnant.

75. Vertebral Deformity and Cardiopathy during Pregnancy.

P. KLEIN (*Arch. f. Gynäk.*, September 1st, 1927, p. 653) draws attention to the need of surveillance during pregnancy of women with severe kyphosis and scoliosis; in addition to pelvic deformity morbid conditions of the heart are present which may have serious or even (as in two cases here described) fatal consequences. The "cor kyphoscolioticum" is associated with typical *post-mortem* findings of muscular degeneration, well marked hypertrophy of the right ventricle, and little or no alteration of the valves. Strain is thrown on the heart by (1) the compression of one lung by vertebral deformity and compensatory emphysema of the other, (2) impediment of thoracic breathing by ankylosis of the ribs, (3) difficulty of cardiac expansion owing to narrowing of the thorax. Women with advanced kyphosis and scoliosis are subjected to increased cardio-vascular strain from the earliest months of pregnancy and during each of the stages of labour. Klein describes sixteen cases and alludes to 103 others, in the majority of which grave signs of cardiac embarrassment occurred in the earliest stages of pregnancy. He thinks that when signs of decompensation have appeared before pregnancy, or when medical treatment is not speedily effective in cases in which cardiopathy is noted during the early months, induction of abortion is indicated. When the patient is first seen with marked signs of cardiac trouble during labour it is probably wisest to perform Caesarean section; this is the best means of eliminating the muscular labour of parturition, and has the advantage that by a simultaneous Porro's operation the patient may be spared the dangers of the puerperium and protected from the risks of subsequent conception.

76. Respiratory Emphysema in Labour.

C. A. GORDON (*Amer. Journ. Obstet. and Gynecol.*, November, 1927, p. 633) reports two cases of respiratory emphysema as an unusual complication of labour, and reviews 130 previously recorded. Both his patients were healthy young primiparae in whom labour was somewhat prolonged, but the pains and straining were no worse than usual. In the first air crepitation with slight tenderness developed subcutaneously over the face, neck, and chest to the nipple level, eventually spreading to the parietal scalp, with entire disappearance by

the fifth day. In the second an area of emphysema extended from the infraclavicular space to the zygomatic arch on the right and to the lower jaw and trapezius on the left; by the fifth day it was present only just above the right clavicle, and had entirely disappeared by the tenth day. No predisposing cause could be discovered in the first case, while in the second the fact that the patient had had resection of two ribs for empyema in childhood may have been a determining factor. The clinical course of both was uneventful. The condition usually occurs during the second stage, but may arise in the first; frequently it is not noticed until after delivery, and may originate in any part of the air passages. Its etiology and pathology are not known. The prognosis is good and treatment is expectant, rapid delivery being indicated for steadily increasing emphysema or for symptoms of respiratory distress.

Pathology.

77. Inheritance of Susceptibility to Malignant Tumours.

CLARA J. LYNCH (*Journ. Exper. Med.*, December, 1927, p. 917) has already adduced evidence that susceptibility to spontaneous tumours in mice is inherited. She has now performed a series of experiments to determine whether susceptibility to tumours induced by tar is also inherited. Two strains of mice were chosen: (1) an agouti strain having an incidence of spontaneous lung tumours of 6.73 per cent., and (2) an albino strain having an incidence of spontaneous lung tumours of 37.04 per cent. Thirty mice of each group were painted on twelve different regions of the body with tar extract; each region was painted four times, the total treatment lasting four months. The incidence of lung tumours in the agoutis was 22 per cent., in the albinos 85 per cent. The effect of the tarring had therefore been to raise the incidence of lung tumours considerably in both groups of mice. The agoutis had been crossed with the albinos, and 35 of the F1 generation were tarred; after six months, when the surviving animals were killed, the incidence of lung tumours was 79 per cent.—that is, nearly as high as in the pure albino mice. Males of the F1 generation were then back-crossed with females of the albino strain, and the offspring tarred; the incidence of lung tumours in these mice was 81 per cent., or about the same as in the pure albinos. The same males of the F1 generation were also mated with females of the agouti group; 39 offspring, all agoutis, resulted and were tarred, the incidence of lung tumours being 39 per cent.—that is, greater than in the pure agoutis, but considerably less than in the albinos. The author concludes that there is little doubt that susceptibility to tumours induced by tar is inherited. It would appear that at least one factor governing susceptibility is dominant, for the F1 generation when back-crossed with the albinos gave approximately the same rate of tumour incidence as the pure albinos; on the other hand, the back-cross with the agoutis gave an intermediate result, indicating that probably more than one factor is involved.

78. The Etiology of Localized Oedemas.

J. CARLES (*Journ. de Méd. de Bordeaux*, November 25th, 1927, p. 847) draws attention to the fact that a localized oedema of cardiac or nephritic origin is usually related to a previous trauma. He mentions one case in which a previous fracture determined the site of oedema in a nephritic. In another case erysipelas was the factor which started an oedema of the face only. In cases of unilateral hydrothorax a previous pulmonary lesion, such as pleurisy or tuberculosis, is nearly always to be found. As an explanation the author suggests that in accordance with a general law by which microbes and poisons are attracted to the seat of a lesion a special aptitude is conferred on the tissues to detain locally such substances as chlorides and sodium. Or it may be that trauma has the effect of damaging the osmotic power of the capillaries or modifying their vasomotor functions.

79. Modification of Tuberculous Lesions by the B.C.G. Vaccine.

P. P. DWIJKOFF and L. P. MASOUROWSKI (*Ann. de l'Inst. Pasteur*, November, 1927, p. 1194) vaccinated 17 guinea-pigs with the B.C.G. vaccine. The doses used were very small and were administered by the mouth, subcutaneously, or by intraperitoneal injection. The animals were subsequently inoculated with a very small dose of virulent tubercle bacilli, apparently by the same route as that used for vaccination. All the guinea-pigs except four died in from three weeks to three months; the four exceptions lived from four to seven and a half months. At necropsy the lesions in the guinea-pigs were found to be distributed throughout the usual organs,

but histological examination revealed that the tuberculous process was often advancing only slowly or was actually retrogressing. Fibrous tissue was abundant, caseation was not very marked, and in some animals actual calcification was seen. The guinea-pigs that survived for some months showed actual cavities in the lungs, together with calcareous masses. The authors conclude that in animals vaccinated with the B.C.G. strain and subsequently infected with virulent tubercle bacilli the lesions tend to be sclerotic, particularly those in the lymphatic glands and liver. The alteration in the course of the disease, however, is not sufficient to prevent death.

80. Effect of Sodium Salicylate on the Heart.

A. M. MASTER (*American Heart Journal*, December, 1927, p. 180) has studied the effect of sodium salicylate on normal individuals in order to determine whether the use of this drug in rheumatic fever produces some of the electro-cardiographic changes observed in that disease. These include prolongation of the P-R interval, from an almost imperceptible depression of conduction to dropped beats; partial or complete heart-block; alteration in rhythm (sinus arrhythmia, sino-auricular block, nodal rhythm, premature beats, paroxysmal tachycardia, auricular fibrillation, and flutter); and changes in the QRS group and ST transition interval. Master gave full medicinal doses (that is, 60 to 120 grains of sodium salicylate in the twenty-four hours) to thirteen patients in hospital, until toxic symptoms occurred. The patients' hearts and lungs and blood pressures were previously normal. Electro-cardiograms were taken before and after the salicylate administration. The drug had no effect on the pulse rate, the electro-cardiographic tracing showed no abnormality, and no evidence was obtained that the drug affected normal heart muscle. The author concludes that since in rheumatic fever electro-cardiographic changes are almost invariably present, and sodium salicylate has been shown to be incapable of causing such alterations, they must be due to the disease alone.

81. Transmissible Toxicogenicity of Streptococci.

M. FROBISHER, jun., and J. H. BROWN (*Bull. Johns Hopkins Hosp.*, September, 1927, p. 167) cultivated non-toxicogenic, non-scarlatinal streptococci, and strains of *B. coli*, *B. prodigiosus*, *B. subtilis*, and *S. albus* in mixed culture with toxicogenic scarlatinal streptococci, and recovered them in pure culture. Two non-scarlatinal streptococci were then found to have acquired temporarily a definite toxicogenicity giving rise to a toxin which was neutralized by antiscarlatinal serum. The other organisms did not acquire any toxicogenicity. The authors also found that non-toxicogenic streptococci might acquire a toxicogenicity from sterile Berkefeld filtrates of the scarlatinal type, although the toxicogenic powers so acquired were in general less marked than those acquired from the mixed cultures. This is taken to suggest the existence of a filterable second factor associated with the scarlatinal streptococci.

82. Pathogenesis of Tuberculosis in Adults.

F. HARBIZZ (*Norsk Mag. f. Lægevidensk.*, November-December, 1927, p. 892) publishes *post-mortem* findings during the ten-year period (1916-25) at the Rikshospital in Oslo, where 1,882 complete examinations were made of persons over the age of 15. Among them there were 239 cases in which death was due to tuberculosis, pulmonary tuberculosis being responsible for 141 deaths, and other forms of this disease for 98 deaths. Among the 141 cases of fatal pulmonary tuberculosis there were 35 in which the necropsy findings proved, or suggested, that the disease was caused by infection in childhood. Among the 98 cases of other forms of tuberculosis there were as many as 65 in which the disease could be traced to infection in childhood. Thus 100 of a total of 239 fatal cases of tuberculosis could be regarded as auto-reinfections. This proportion (42 per cent.) of auto-reinfections was probably an underestimate, as some cases of old infections in childhood may have been overlooked. When the persons dying between the ages of 16 and 30 were considered by themselves it was found that among the 478 necropsies made on persons of this age there were as many as 143 (30 per cent.) whose deaths were caused by tuberculosis. At the necropsies of these 143 cases signs were found of an old infection in childhood in as many as 79 (55 per cent.). The author concludes that with regard to tuberculosis in structures other than the lungs the disease in adult life is usually the result of spread of infection from a focus which developed in childhood. He is more cautious in his judgement with regard to fatal cases of pulmonary tuberculosis in adults, as it is comparatively difficult to judge from the clinical history and the *post-mortem* findings between the possibilities of a new, an exogenous, and an endogenous infection from an old focus.