

# AN EPITOME OF CURRENT MEDICAL LITERATURE.

## MEDICINE.

### (233) Latent Scarlatina.

CAZIOT (*Sem. Méd.*, June 24th, 1903) gives an account of a case of latent scarlet fever which was the cause of a small epidemic in an orphanage of which he is the medical officer. On October 24th a child developed suddenly the symptoms of a mild attack of scarlet fever, the next day two others were attacked, and eventually there were in all 18 cases. The problem was to explain the origin of the first case. There had been no previous outbreak in the orphanage for thirty-two months, so that it was to all intents and purposes impossible that any germs should have remained active since that period. The children in the institution were carefully isolated from contact with the inhabitants of the surrounding country, where also there had been no case for six months. Moreover, during the epidemic in the neighbourhood, the orphans escaped, while the outbreak among them did not spread outside. The children had returned from their holidays on October 8th, and the possibility of infection from their families might be excluded, particularly as one of the three cases referred to had not been away during vacation. The logical conclusion was, therefore, that a child must have returned with unrecognized scarlet fever, which he communicated to his companions. A further investigation revealed the following facts. On October 13th a new pupil, aged 10½ years, had a fit of coughing while being examined. He was carefully investigated, and nothing abnormal was noticed except a slight redness of the chest; there was nothing wrong with the throat. From October 15th to 17th two of the children had a little sore throat, one of them being the immediate neighbour, both in class and dormitory, of the one last mentioned; none of these three children ever showed any desquamation. On inquiry it was ascertained that the child first mentioned had on October 7th been exposed to the possibility of contagion in a town wherein he had passed the day and night, it was also found that he had had a slight headache on October 11th and 12th. This then may be considered to have been a case of latent, or, to be more accurate, masked scarlatina, and an example of an ambulatory form of the disease which is closely allied to the milder recognizable varieties, and is of great epidemiological importance. Of the milder forms the author calls attention to two—namely, scarlatinella and apyretic scarlatina. In the first the rash is faint, and the peeling insignificant, the sore throat may be represented merely by a little difficulty in swallowing or by a slight swelling of the tonsils, and the fever does not exceed about 102°. In the second, of which 3 cases occurred during the epidemic under notice, all the symptoms are present except the fever. The scarlatinal poison appears to possess two essential properties—that of acting powerfully upon the thermotaxic centres

and that of influencing with equal force the vasomotor centres, and the two mild forms just described differ from the typical disease in the more or less complete suppression of one or other of these influences. When, however, the toxin passes through one or more human subjects, its virulence may be exalted to such an extent as to produce even the severest form of the disease.

### (234) Lupus Erythematoses.

E. HOLLAENDER (*Berl. klin. Woch.*, July 28th, 1902) says that since he introduced his method of hot-air cauterization for lupus vulgaris he has come across a number of cases of lupus erythematoses, which he thought should respond to the treatment, if this form of skin affection was in reality a tuberculous process. They were, however, not in the least degree improved by the cauterization, and therefore he reports fully his observations with regard to this disease. Before doing so he gives a short summary of the names which various authors have given to this disease, and the arguments which have been used for and against the suggestion that it is a tuberculous affection. For this assumption is urged: (1) Lupus erythematoses occurs chiefly or only in individuals who are suffering from tuberculosis, or who are predisposed to this illness; (2) the patients often become affected with tuberculosis, especially of the lymphatic glands, and frequently die of this disease; (3) the clinical appearances of lupus erythematoses and lupus vulgaris are very similar; (4) transition from the one to the other disease at times occurs; (5) lupus erythematoses may react to tuberculin; and (6) the statistics of Roth and the arguments of Boeck are in favour of the assumption. Against it he says that the following statements have been put forward: (1) Tuberculous disease and taint does not occur more frequently in patients suffering from lupus erythematoses than in other patients; (2) such patients may be attacked by tuberculosis, but this is partly accidental and partly to be regarded as a complication caused by a severe disturbance of the whole organism; (3) cases of lupus erythematoses and lupus vulgaris cannot be mistaken for one another; (4) a transition from the one to the other disease does not take place; (5) reactions to tuberculin have not been observed in the majority of cases; (6) the histological structure of lupus erythematoses and of lupus vulgaris is totally different, and Koch's bacillus has never been found either by microscopical, cultural, or inoculatory experiment in the latter. Since the affection is a superficial one, Hollaender considers that it is very unlikely that all attempts to find the bacillus should prove fruitless, and, further, that the hot-air cauterization would be sure to destroy these if they were present. The statistical evidence is to his mind based on weak grounds. In the same communication he states that he is in a position to recommend a method of treatment which is able to bring about a cure even in the most obstinate cases. The method consists in the internal administration of quinine and the external application of iodine. He first determines if the patient can take

quinine by giving small doses ( $\frac{3}{4}$  gr.) of the hydrochlorate or sulphate, and then gives 7½ gr. three times a day, and five or ten minutes after the dose, he paints the affected area freely with iodine. This is continued for five or six days, and after a pause of the same duration he repeats the procedure. At times the quinine produced temporary disagreeable effects, but in all cases he was able to continue the treatment without any permanent bad effects ensuing, and always with ultimate success,

### (235) The Value of Calorimetric Examination.

A. SCHLOSSMANN (*Berl. klin. Woch.*, March 23rd, 1903) states that the examination by calorimetry has found little favour for two reasons; first, because it is believed that the technical difficulties are great; and secondly, because the value for clinical uses is much undervalued. Theoretically as well as in practice this method throws much more light on certain conditions than chemical examination, because by its means the total energy in the form of latent heat of any material can be measured. We realize that all food is taken with the object of supplying energy, and if one knows how much energy (heat) is wasted by being excreted in the faeces and urine, one can form a good idea as to the suitability of the diet. Schlossmann says that he values this method very highly in the feeding of infants. The estimation of nitrogen in the faeces and urine is fraught with difficulties, since there are several sources for the nitrogen besides the energy-supplying food. Bacteria contain not inconsiderable amounts of nitrogen, and in certain cases the nitrogen estimation would only lead to erroneous results. Not so, however, the results of burning up the material in an excess of oxygen, and therefrom estimating its calorimetric value. The urine of diabetics is generally examined and expressed according to the percentage of sugar excreted, while Schlossmann thinks that it would be more comparative and more useful if one expressed and measured the diabetes in calories, that is, by determining how many calories the patient wasted in his urine *pro die*. The same can be said of gout patients and of those suffering from nephritis. With regard to the estimation itself, he points out that Hempel's apparatus is not difficult to work, and that it can be reasonably expected of a modern practitioner that he will be capable of employing it correctly. The apparatus is not dear; it is comparatively simple and is exact.

## SURGERY.

### (236) The Value of Ear Symptoms in the Diagnosis of Injuries of the Skull.

In dealing with the importance of ear symptoms in the diagnosis of fracture of the base and other cranial injuries Stenger (*Berl. klin. Woch.*, February 2nd, 1903) distinguishes between fresh and old injuries. In the case of the former the symptoms of concussion are most prominent, and those of ear trouble can only be utilized as diagnostic helps. Discharge of blood and cerebro-spinal fluid deserves attention. When the

cerebro-spinal fluid is found in the discharge, it may be taken as comparatively certain that there is a fracture of the base, but when only blood is seen one must realize that the bleeding point may be sought in different places. Bleeding from the ear is far more important in this respect if one can find a fissure in the bony canal. The same may be said of rupture of the tympanum. The functional symptoms are of greater value, and if in fresh cases these are at times covered by the other symptoms, a careful consideration of them will usually be found useful in making the diagnosis. These symptoms are evidenced by (1) disturbances of hearing and tinnitus, (2) giddiness, and (3) signs of paralysis of nerves. Stenger says that the disturbances of hearing, which are the most important symptoms, are due either to injury of the auditory nucleus or of the nerve itself or of its peripheral distribution. When the nucleus is attacked, total deafness on that side will necessarily follow and the cerebral symptoms will be marked; when the nerve is injured in its course one generally finds implication of the facial nerve. In the last place, when the nerve is injured in its distribution one meets with the so-called labyrinthine symptoms. These may be recognized by the shortening of the perception of sound conducted through the mastoid process; this is ascertained by measuring the length of time in which the patient can still hear the tuning-fork after it is applied to the process, but care must be taken to avoid false conclusions. The next symptom in this category is the failure to perceive high notes. Stenger looks on this as absolutely diagnostic of disturbance of the labyrinth. He deals with the giddiness which is due to injury to the semicircular canals, and points out that the type of the giddiness is definite. Unilateral nystagmus is frequently seen in connexion with injuries of the head, and may point to direct implication of the canals. In this case the movements are directed towards the unaffected side, and may be described as a tetany of the muscles of the eye. The only nerve paralysis which points to direct injury of the ear is that of the facial; but when other nerves are affected, such as the optic, and the organ of hearing is also affected, one can form a good idea of the direction of the bony injury. By attending carefully to the functional condition of the hearing apparatus one can distinguish between true injury of the skull and malingering.

(637) **Foreign Body in the Respiratory Tract.**

COURMONT AND ANDRÉ (*Lyon Méd.*, June, 1903) had under their care a man who died from the sepsis caused by the lodgement of a large pin at the bifurcation of the trachea. The pin, which was 8 cm. in length and which had a glass head, at first lodged at the level of the hyoid bone. Five days later it fell during an operation for its removal, and on the following day the symptoms of infection—pyrexia, sweating, jaundice, etc.—were already observed. The left base became dull up to

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the angle of the scapula, and after 300 c.cm. of blood-stained serum had been removed, multiple râles were heard, and bronchial, with occasionally cavernous, breathing. The sputum was purulent and mixed with blood. Muscular and articular rheumatism appeared, the jaundice increased, and the patient died from sepsis a little more than a month after the accident. At the necropsy, the head of the pin was found obstructing the bronchi leading to the lower half of the left lung. The lower lobe of the left lung was solid, the septic broncho-pneumonia being extensive and intense enough to simulate lobar pneumonia. The upper lobe, the bronchi of which were not obstructed, was merely engorged with hyperaemia. The head of the pin was encysted and had to be removed forcibly at the necropsy; but at one stage during life it had evidently acted as a ball and socket valve, allowing the escape of sputum but not the entrance of air. The patient had complained of a sharp pricking pain after coughing, and on the lower end of the right wall of the trachea was a row of small punctures, one of which formed a purulent fistulous track, leading to an abscess, the size of a small nut, situated in the upper lobe of the right lung. The ball and socket action might account for the cavernous breathing occasionally heard. The pathogenic germs were multiple; the sputum contained typical pneumococci and some other cocci; blood obtained from the veins of the forearm about the fifteenth day after infection contained the staphylococcus albus, which was, however, harmless to both guinea-pigs and rabbits.

(638) **Accidental Inclusion of a Vesical Calculus in a Suture during Bassini's Operation.**

NOSSAL (*Wien. med. Woch.*, August 1st, 1903) performed suprapubic lithotomy on a man, aged 68. For a year there had been strangury, frequent micturition, and haematuria, which were aggravated by jolting. A year before the lithotomy he had been operated on for strangulated right inguinal hernia. After incision of the bladder the stone, which was of the size of a walnut, was seized with forceps, but could not be moved. The vesical wall was everted for purposes of inspection. It was then found that the upper end of the calculus was firmly fixed to the bladder by a loop of suture which surrounded it. This was divided and the calculus was removed without further difficulty. The man afterwards stated that a radical cure had been performed for the hernia, and that for several days after the operation the urine contained blood. Obviously one of the sutures, which in Bassini's operation fix the muscular layers to Poupart's ligament, had accidentally included the wall of the bladder, and when tightened had anchored the calculus to it. Cases of inclusion of the vesical wall in Bassini's operation were not uncommon, but the accident is easily avoided if the bladder is emptied immediately before the operation. In several cases subsequent operations have been undertaken for the removal of the sutures. In one case the suture had become loose in the bladder and had served as the nucleus

of a calculus; but Nossal's experience is probably unique.

(639) **Horseshoe Kidney.**

VOISIN AND GALIPPE (*Bulletins et Mém. de la Soc. Anat. de Paris*, June, 1903) dissected a case of this important anomaly. The patient was a man aged 46, of intemperate habits, who died of pneumonia, with albuminuria. The left kidney, larger than its fellow, lay in its normal situation; the right was situated lower, and its inferior extremity was rotated inward over the vertebral column, and fused to the corresponding part of the left kidney. There were two ureters, which opened separately into the bladder. They crossed the anterior aspect of the horseshoe in their downward course. The combined renal pelvis lay anterior to the renal artery and vein, only a few branches of the latter lying in front of it. An artery—not from the aorta, but from the left common iliac—ran up to the lower border of the horseshoe, and, divided into two branches, distributed one to each kidney.

**MIDWIFERY AND DISEASES OF WOMEN.**

(240) **Pubiectomy.**

PUBIOTOMY, or more correctly hebotomy, was introduced as an alternative to Caesarean section or perforation more than 80 years ago; but it is only recently that good results have been reported. H. Van de Velde (*Wien. klin. Woch.*, July 15th, 1903) describes the operation as now performed: A cutaneous incision is made from the left spine of the pubes downwards and inwards to the outer surface of the left labium majus opposite the vestibule. The left index finger then burrows in the lower angle of the wound until it reaches the inferior and posterior surfaces of the pubic bone. A specially-constructed needle, curved to suit the posterior outline of the pubic bone and with a bluntish point, in the side of which is a slot eye, is introduced into the lower angle of the wound and, guided by the left forefinger, is passed upwards behind the pubic bone until it emerges in the upper angle of the wound. The ring of a Gigli's saw is hooked into the eye of the needle, which is then withdrawn so that the saw comes to lie behind the pubic bone. This is divided in a few seconds. The saw is withdrawn from the lower angle of the wound. Haemorrhage, which is usually slight, is arrested by tampons and the wound is dressed antiseptically. The inner surface of the labium majus should be everted over the wound by pressure forceps. This prevents infection of the wound by vaginal discharges. The wound may be closed immediately if there is no haemorrhage, otherwise it is left until delivery is effected. The advantages of hebotomy over symphysiotomy are: (1) It is easier and more rapidly performed; (2) the bladder and urethra and a part of the anterior vaginal wall retain their natural support; (3) extension of the wound into the vagina is less probable, as the soft parts are thicker laterally than in the centre; (4) for this reason and because the clitoris is avoided there

is less haemorrhage; (5) the wound does not communicate with the vagina or vulva; this is a great advantage in septic cases; (6) union is more rapid and effectual between bony surfaces than in the case of a joint such as the symphysis, and there is less danger of suppuration; (7) in a subsequent labour hebotomy may be performed on the other side, while a second symphysiotomy is difficult and dangerous on account of adhesions between the bladder and the posterior surface of the symphysis. The results of this operation have been brilliant. In the 12 reported cases all the children have been born alive, and all the mothers have recovered without any disturbance of gait. In one case the operation was performed in a hovel, and in several after the onset of septic infection. In one case the true conjugate was only 3 in. But perhaps the greatest advantage of hebotomy is that if after the operation the pelvis is not too tightly bandaged, a permanent increase in its capacity may result. The gap between the severed ends of the os pubis becomes filled with callus. The pelvis is larger, though somewhat asymmetrical, the clitoris and urethra being displaced to the right. Thus in one of the writer's cases the distance between the anterior superior spine of the ilium was 2 cm. more on the left side than on the right, though before the operation the pelvis was symmetrical. If in attempting to obtain permanent pelvic enlargement union appears to be endangered, the bandages should be tightened, and the duration of treatment is but little lengthened. In some of the writer's cases the patients were up and about three weeks after the operation.

#### (241) Vulvo-vaginitis in Infancy and Childhood.

BERKENHEIM (*Dietskaia Medicina*, No. 3, 1902) observed cases of vulvo-vaginitis in children in a Moscow hospital for ten years. He concludes that the etiology of this disease is the same in childhood as in adults. In 75 per cent. of the cases there is gonorrhoeal infection. The reasons why vulvo-vaginitis is so much milder in children seem clear; the vagina before puberty is short, there are few rugae which might conceal and foster the infective matter, the vessels of the mucosa are ill-developed, and there are but few glands. Menstruation, pregnancy, and parturition, as well as coitus—factors prejudicial to the cure of vulvo-vaginitis—are absent in such cases. Vulvo-vaginitis is most common in very little girls, often well nourished and in good health; its average duration under treatment is 7½ weeks; one-third of all cases become chronic. All the well-known local complications were observed in the Moscow hospital, and also conjunctivitis, peritonitis, and arthritis. The cases of peritoneal inflammation were mild, as were those of arthritis, usually limited to one joint. Rest and general treatment are necessary. Berkenheim found that no medicament used for injections had any specific action; indeed permanganate of potash, protargol, ichthyol, sulphate of zinc, and boracic acid were found by him to have no influence in shortening

the course of the malady. The pus must be removed, and for this purpose free douching is necessary. A special basin and napkin must be reserved for each patient.

#### (242) Torsion of Fibroid Uterus.

FAURE (*Rev. de Gynec. et de Chir. Abd.*, July-August, 1903) removed a fibroid weighing over 24 lb. by abdominal hysterectomy. Two years previously the patient had suffered from severe attacks of abdominal pain. The torsion had reduced the lower part of the uterus and the vessels of the broad ligament and appendages to a short cord hardly as thick as a man's little finger. The veins in the tumour were enormous, and there were intimate adhesions to the great omentum. Faure first divided the pedicle and secured it; then he turned down the tumour and separated adhesions at leisure with facility.

#### (243) Protracted Pregnancy and Heavy Fetus.

FUCHS (*Monats. f. Geb. und Gyn.*, August, 1903), having examined two cases of giant fetus, one 6,700 grams (14½ lb.) and the other 7,550 grams (over 16½ lb.), scrutinized the reports of labours in a public institution at Kiel. In 183 out of 2,200 labours, or 8.31 per cent., the child weighed over 4,000 grams (over 8¾ lbs.). It was found that in at least 100 of the 183 cases pregnancy had been protracted beyond the normal term; in fact it was the most frequent and most evident condition associated with abnormally heavy fetus.

#### (244) Cancerous Degeneration of Wart on Labium.

FLATAU (*Zentralbl. f. Gyn.*, No. 32, 1903) recently exhibited before a society a specimen of cancer of the labium majus. He had removed together with this growth a mass of glands in each groin, enlarged to the size of a small fist. The disease had arisen from a small papillary growth on the labium, which had been noticed by the patient for several years. It suddenly took on malignant growth at a time when the patient suffered from severe mental worry.

### THERAPEUTICS.

#### (245) The Method of Action of Crede's Collargol.

J. BAMBERGER has studied the method of action of collargol in septic conditions, and in describing these he states that he does not intend to publish cases which shall speak for or against the treatment, but merely wishes to show how the effect on septic infection is attained (*Berl. klin. Woch.*, August 24th, 1903). Credé regards the action as a purely bactericidal one, but Brunner showed that this was not so, since collargol exerts only a marked inhibitory action on the growth of bacteria and no destructive action. He found that the number of leucocytes, and especially of eosinophile cells and lymphocytes, is greatly increased during the first and second day after the injection. Bamberger added some collargol to horse's serum, and found that silver particles

were thrown down from the solution. In the course of eight days the serum tubes, which had been exposed to the air, were simply crowded with bacteria. Experiments with injections show that the silver is deposited in the blood current as very finely divided particles, and is not kept in solution. The deposited silver particles cause enormous numbers of leucocytes to be attracted to them, and the latter absorb these particles. In doing this they fall a prey, and the body seeks to cover this defect by producing more leucocytes. As a rule, the toxins of septic bacteria call forth an increased manufacture of leucocytes, but the stimulus is greatly increased by injections of collargol. He was able to show in some experiments on rabbits that certain tissues, for example, kidney, spleen, contained an increased amount of iron, mostly in the form of haemosiderin, which is due to the destruction of red blood corpuscles. Experimenting on himself by rubbing in Credé's ointment, he found that during the first two hours, the number of leucocytes diminish, but five hours after the rubbing in, the number is markedly increased. Bamberger next discusses the question whether part of the action may not be due to the colloidal properties of the preparation, and tends to support this argument by a simple experiment. If one adds a few drops of a 2 per cent. solution of collargol to peroxide of hydrogen, the drops fall at first to the bottom of the test tube, and then rise suddenly, as oxygen is liberated, and at last get split up into fine granules. These granules are blackish-brown, and have the same appearance as the silver particles found in the organs of frogs after collargol injection. It may be that the catalytic action of colloidal silver is the reason why collargol is not kept in solution in the blood. He thinks that further investigation is necessary before one can decide how far this property of collargol affects an infection, or if the whole action is dependent on the increased leucocyte formation.

#### (246) Urotropin in Typhoid Fever.

ERNST FUCHS (*Deut. Arch. f. klin. Med.*, lxxvi, 1-3) records the results of experiments undertaken with a view to ascertaining the value of urotropin in preventing bacteriuria in typhoid. Two points to which he devoted his attention were, first, how early the treatment was to be begun; and secondly, for how long the drug should be continued in order certainly to prevent the symptom. He found that out of 115 typhoid patients the bacteriuria only began twice during the febrile period; in other words, that it was, strictly speaking, a phenomenon associated with convalescence. It was inferred therefore that administration of urotropin should be commenced in the fastigium and continued well on through the convalescent period. The author compares two sets of cases. In the first series, 53 in number, urotropin was not administered; 15 of them suffered from bacteriuria. To these may be added 22 previous cases, in all of which this symptom was present, making a total of 26 out of 75; of these 26, in 12 the bacteriuria was due to the typhoid bacillus. The second

series was 40 in number; all received the prophylactic treatment with urotropin; in only one case did bacteriuria appear. The dose of urotropin employed was 2 grams per diem. The author concludes that the administration of urotropin in typhoid fever will certainly impede the appearance of bacteriuria.

#### (247) Epidural Injections.

A. STRAUSS gives a short summary of the epidural method of introducing various medicaments into the spinal canal without touching the cord (*Berl. klin. Woch.*, August 17th, 1903). His method was first introduced by Cathelin in 1901, but in 1885 Corning had already described his attempts to inject solutions into the spinal canal. Several other investigators attacked the subject, but none succeeded in entering the epidural space. The advantages of Cathelin's method, as compared with other forms of medication, for example, hypodermic injection, lies in the fact that drugs are absorbed much more rapidly. This was proved by experiments with methylene blue. The injections are carried out by means of a needle, preferably about 6 cm. in length and 3 mm. in thickness. Strauss finds that a platinum-iridium needle is the best, since this can be sterilized in the flame. Although almost any good syringe can be used, he strongly recommends an automatic metallic syringe of his own design, which can be refilled without being removed from the needle when this has been introduced. As a rule, solutions of the hydrochlorate of cocaine ( $\frac{1}{4}$  to 4 per cent.) are used for anaesthetising, but it has been shown that physiological salt solution is capable of replacing this, even in painful affections. Orthoform, eucaïne, dionine, acoïne, antipyrin, aconitine, atropine, and other drugs are also used. For syphilis Strauss has used epidural injections of corrosive sublimate (2 per cent.); but although, as a rule, the injections are well tolerated and do not produce any serious side effects, he still prefers the intramuscular injections of 10 per cent. hydrarg. salicyl. Physiological saline solution has further been employed for uraemia, cardiac failure, and collapse, while the method is suggested for introducing drugs such as guaiacol, etc., in tuberculosis, bromides in epilepsy, chloral in tetanus, artificial serum in meningitis, etc. The injections are best carried out with the patient in the left lateral position, with the thighs flexed and the knees well drawn up on the abdomen. Three points, of which two are constant, must be sought. These two are the fifth posterior and inferior sacral processes. They can be readily felt in all but very fat persons, and are mostly visible. The third point lies above and between the first two; it is the apex of the sacral apophysis. Joined together, these three points enclose a triangular or U-shaped space, having its base downwards. It usually measures about 1 cm. in breadth, and 2 cm. in height. The index finger of the left hand is passed over the spinous processes downwards, until it feels this triangular space. It is wiser to allow

the left forearm to rest on the patient's back. The skin has been previously disinfected and cleaned; the needle is then introduced obliquely upwards, beneath the left index finger, which presses on the membrane, in order to render it tense. As soon as one feels that the membrane is perforated, the syringe is depressed and the needle is slowly pushed upwards in the middle line. If one strikes bone, the needle must be withdrawn somewhat and the syringe lowered. The puncture is not painful, and with a little practice is easy. If any oedema occurs, it is a sign that the needle has not entered the epidural space. Strauss states that apart from one case, of a fat individual, in whom the solution was injected beneath the skin, and not into the spinal canal, he has not met with any unpleasant effects of the method. He next deals with clinical results obtained by those who had taken up the method. The results in sciatica vary considerably, but those in neuralgia and painful conditions of the bladder are very satisfactory. In tuberculous cystitis, gonorrhoeal cystitis, pyonephrosis, and carcinomatous infiltration of the urinary track, it is only of temporary value, but in both retention and incontinence of urine it gives excellent results. The best results were included in cases of enuresis nocturna in infants, and children. This method of employing drugs deserves careful study, and Strauss warns investigators not to expect too much, but at the same time to have a reasonable amount of confidence in trying the method.

#### (248) Burns treated locally with Glycerine of Tannin.

CAPULLANO (*Gazz. degli Osped.*, September 13th, 1903) speaks highly of the above method of treatment which he and his colleagues have practised for some time. It is applicable to burns of all degrees. The author uses a 50 per cent. (or less) solution, using the purest glycerine he can procure. If the burn is of the second degree he punctures the bullae, then applies the glycerine of tannin and covered with gauze and cotton-wool. The application is repeated several times a day without removing the gauze, which is allowed to remain *in situ* until it separates itself. By this simple treatment the author says he gets far better results than with any other of the numerous remedies in vogue. The tannin is slightly antiseptic, and by coagulating the albumen forms a sort of protective varnish over the tissues, whilst the glycerine also exercises a certain antiseptic power.

#### PATHOLOGY.

##### (249) Bacillus Subtilis as the Cause of Panophthalmia.

PANOPHTHALMIA usually presents itself as an extremely acute inflammatory condition following a wound by some foreign body, such as a piece of metal. Silberschmidt (*Ann. de l'Inst. Pasteur*, April, 1903) has examined the vitreous in two cases of panophthalmia. From the first an organism was isolated in pure culture and caused typical panophthalmia when inoculated into the

vitreous of rabbits. In the second case an organism of similar characters was isolated also in pure culture; both organisms belonged to the group of bacillus subtilis. A description of an organism of similar characters has been given by Poplawska from 6 cases of panophthalmia, and Kayser has also recorded 2 cases, in one of which *B. subtilis* was found in pure culture, in the other it was associated with staphylococcus aureus and albus. Special danger appears to attach to wounds received during agricultural labour. Silberschmidt produced panophthalmia experimentally by the inoculation of emulsion of soil into the vitreous, and from two such cases isolated *B. subtilis*. It is not probable that this organism is by any means the sole cause of panophthalmia, and the types described by various authors, while apparently belonging to the group, exhibit differences. There are many questions still to be elucidated in the etiology of panophthalmia, one of the most interesting being its geographical distribution; in some districts it is unknown. The inflammatory reaction produced experimentally by *B. subtilis* in the vitreous is strictly localized to the eye, and progresses very rapidly; it resembles clinically panophthalmia of man; *B. subtilis* is usually considered non-pathogenic to man, but researches have at least shown that it is concerned in a considerable proportion of cases of panophthalmia, and experimental observations would seem also to show that the eye, and especially the vitreous, is a specially favourable field for its activity.

##### (250) Action of Human, Bovine, and Avian Tubercle Bacilli on Cattle and Sheep.

MAFFUCCI (*Clin. Modern.* an 9, n. 34) publishes a full account of his experiments on this subject. His conclusions are as follow: The bacillus of bovine tuberculosis is widely pathogenic for the same species of animal. Human tubercle bacillus causes in cattle a transitory lesion which heals, causing, however, trophic disturbances which may slowly disappear. The ox is capable of becoming habituated to strong doses of virulent human tubercle bacilli injected into the veins. Tuberculous products derived from the corpses of human beings and subcutaneously injected into calves have determined a lesion, which, however, remains strictly local and slowly heals. The reverse of this occurs with bovine tuberculous products. Calves intravenously injected with human tubercle have shown no trace of infection after eight months, and yet 50 days later, after a strong injection, develop grey tubercles in the lung. The bacillus of human tuberculosis may remain alive in the tissues of the calf if the resulting abscess is encapsulated. Avian tubercle is powerfully toxic for calves when intravenously injected. The tuberculin reaction (practised with human tubercle bacilli) is positive in oxen and sheep. Sheep resist human tuberculosis less than calves if the bacilli are injected into the veins. It is possible to induce in cows a certain amount of immunity against pearl tubercle if they are previously treated with strong cultures of human tubercle.