

## AN EPITOME OF CURRENT MEDICAL LITERATURE.

### MEDICINE.

(59) **Pulse and Temperature in Epilepsy, Epileptic Vertigo, and Hystero-epilepsy.** MARCHAND (*Thèse de Paris*, 1899) gives a record of clinical studies on pulse and temperature in attacks of idiopathic epilepsy, epileptic vertigo, and hystero-epilepsy, based on 300 cases at St. Anne's Asylum. Immediately at the close of an attack the patient is placed on a couch and covered to prevent chilling of the body, and the temperature and pulse taken at short intervals (all temperatures are taken in the rectum with verified standard thermometers read *in situ*, and the pulse-rates taken at intervals of five minutes). The general conclusions are as follows: (1) The rise of temperature is readily noticed 10 minutes after a fit, and it attains its maximum in 20 minutes. This maximum elevation lasts only 10 minutes. (2) The epileptic attack causes an elevation of internal body temperature of 0.5 C., and lasting on an average 40 minutes. (3) Attacks of epileptic vertigo cause a less marked, but still noticeable, rise of temperature. (4) Regarding epileptiform attacks, those of general paralysis of the insane cause a decided elevation of temperature comparable to that of true epilepsy. (5) There is in general no relation between the maximum of temperature and the age of the patient, and in the same patient different attacks may cause various temperatures. (6) The pulse rises about 31 beats above the normal in a fit, but 50 minutes after the fit it has fallen to normal. The maximum pulse-rate is 16 minutes after the attack, and this rate is maintained for 5 minutes. (7) Both pulse and temperature return to the normal steadily or with only slight oscillations. (8) In epileptic vertigo the pulse also rises in proportion to the intensity of the attack. (9) In relation to age the same condition as in (5) *supra* holds good. (10) The increase of temperature in epileptic vertigo is 0.3° C.; it lasts altogether about 40 minutes. The maximum point is attained in 15 minutes after the attack, and it persists for 13 minutes, thereafter gradually descending to normal. (11) Hystero-epilepsy increases the temperature by 0.4°, the rise of temperature lasts 35 minutes, and there is a ratio between the length of the attack and elevation of temperature. In two-thirds of the cases the temperature is at its maximum at the beginning of the period of "attitudes passionnelles;" in other cases it continues to rise for about 43 minutes. The duration of maximum temperature is 8 minutes, and the fall of temperature thereafter is gradual. (12) The pulse in hystero-epilepsy rises 57 beats, the acceleration lasts 24 minutes, the maximum frequency being at the onset of the attack (epileptoid period), and

this maximum rate lasts for 4 minutes; it then subsides, not steadily, but irregularly and with decided oscillations. (13) There is no relation between the duration of an attack and the maximum acceleration of the pulse. On the whole the pulse disturbances are much more marked than the temperature changes in hystero-epilepsy.

(60) **Acute Dermato-Myositis.** NEUBAUER of Unverricht's clinic (*Centralbl. f. inn. Med.*, March 25th, 1899) says that diseases of a septic origin must be excluded from dermatomyositis. If Unverricht's views in regard to the disease are followed, there are some 30 cases on record. Neubauer relates a severe case in a girl aged 17. The illness began suddenly two days before admission with fever, headache, and pain in the right leg. The leg was found to be swollen and very tender, and the skin was stretched. The left thigh was also swollen. There was no evidence of endocarditis. The next day the urine contained albumen and casts. A few days later the lumbar region was oedematous, and the intercostal spaces were also distinctly painful on pressure. Roseolous patches appeared on the upper part of the thighs; the spleen could not be felt. Widal's test was negative. The flexor surface of the right arm became subsequently involved, and also the sterno-mastoid muscles. Later in the course of the disease there was sweating and sleeplessness; 400 c.cm. of somewhat turbid and blood-stained fluid was drawn off from the left chest. Later the pleural effusion became absorbed, the albumen and casts disappeared from the urine, and the patient made a good recovery. The diagnosis lay between thrombosis of the inferior cava and dermatomyositis. Trichiniasis, polyneuritis, and typhoidal myositis were easily excluded. The characteristic sweating, sleeplessness, and oedema over the painful back muscles soon appeared. The fever was partly of the continued and partly of the remittent type. The chief symptoms were due to the affection of the muscles, skin, and subcutaneous tissue. The pulmonary and renal complications were very marked. A genuine nephritis has only been recorded in 3 cases. The etiology is obscure, but it would appear to be an infective disease. In well-marked dermatomyositis the diagnosis is easy. The prognosis is rendered uncertain by the possible involvement of the respiratory and deglutition muscles. The treatment is mostly symptomatic.

(61) **Jaundice after Chloroform Anæsthesia.** JAUNDICE after chloroform is said to be exceedingly rare (Dennis in *System of Surgery, sub voce Anæsthesia*); and Murchinson (*Diseases of the Liver*) states that after careful examination he has not been able to find a record of a case. J. N. Brainerd (*University Med. Magazine*, May, 1899), of Michigan, reports 2 cases. (1) A plump, healthy girl of 16, operated on for hare-lip. In two or three days she developed jaundice, and a week after the operation she was "as yellow

as a lemon." The jaundice could only be attributed to the chloroform used. (2) A patient operated on for appendicitis (November 20th, 1898). Jaundice followed after the operation, and was marked in five days. The edge of the wound united by first intention, and the stitches were removed at the end of the first week. Later a local slough formed and was discharged. This jaundice also could only be attributed to the chloroform used in the operation.

(62) **Mitral Stenosis with Infantilism.** M. J. LACOMME (*Loire Méd.*, vol. xviii, p. 63, March 15th, 1899) records the case of a woman, aged 24, of middle height, with two slight genua valga, and chlorotic in appearance. She had suffered from no serious disease such as rheumatism, or chorea, or fever. She began to menstruate at 16 but the flow had been scanty. She quickly becomes breathless. She had mucous patches on the vulva and syphilitic pigmentation on the neck. There was no anæmic bruit but a presystolic murmur was heard over the apex. The mammae were rudimentary; the external genital organs resembled those in the infant, there being little hair over the mons, and the labia majora little developed, nearly glabrous, and gaping so as to allow the labia minora and prepuce of the clitoris to be seen; the uterus was infantile in type. It was considered that the mitral stenosis dated back to before birth. As to its cause, fetal endocarditis was considered as unlikely; it was thought that it could scarcely be regarded as a localisation of an attenuated tuberculosis, as there was neither a family history nor any other manifestations of it; it was therefore ascribed to an arrest of development, to a congenital aphasia. The infantilism of the genital organs and the mitral malformation are looked upon by Lacomme as lesions of the same order, simultaneous and not resulting the one from the other, due to an arrest of development. A similar association had been noted by Giraudeau in the male.

### SURGERY.

#### (63) **Patulous Meckel's Diverticulum: Operation.**

MORIAN (*Langenbeck's Archiv*, vol. lviii, Part 2, 1899) reports a case of a completely patulous ductus cephalo-mesentericus cured by operation. A male infant appeared at birth to be free from any malformation excepting an umbilical hernia. When the part was being cleaned on the fourth day, a red sausage-shaped structure was observed, whence flatus and a little yellow faeces escaped. Motions were freely passed by the rectum. By the third week the child became emaciated. The protruding structure was about an inch long, clearly covered with intestinal mucous membrane, and about as thick as a man's thumb. It lay curved spirally on the protruding navel. At its point was a depression into which a probe could be passed  $\frac{1}{2}$  inches obliquely backwards and upwards. The projection

remained unaltered in size for a month. The operation was performed when the infant was 5 weeks old. On making an incision in the middle line, over the umbilicus, some fluid escaped from the peritoneal cavity. Then the projecting body was seen to run on to the small intestine, as a tube of the thickness of a lead pencil; it widened funnel-like up to its insertion on the intestine opposite the mesentery. It bore no mesenteric fold itself. This Meckel's diverticulum, as it was clearly seen to be, was treated like a vermiform appendix. It was first ligatured near the gut, then divided by Paquelin's cautery. Its serous coat was pushed inwards to the level of the gut and then sewn over. The operator next excised the umbilical sac. The ligamentum teres alone required ligature, as did the urachus below; this foetal relic was filled with a whitish material. The abdominal wall was lastly closed in layers. Recovery was rapid. Three weeks later the child was thriving. A table of 32 cases of completely open Meckel's diverticulum, and 7, where it formed a blind sac, is given by Morian, who appends a full bibliography. The mortality in cases treated surgically many years ago is, as might be expected, high. But all the reported operations for complete patency of the diverticulum undertaken since 1883 were successful. The methods of treatment were—by ligature, 1; cauterisation followed by resection, 1; resection as in Morian's case, 9. One recent case was treated successfully by pressure with strapping.

(64) **Resection of Superior Ganglion of the Cervical Sympathetic for Epilepsy.**

DESCHAMPS (*Gaz. Méd. Belge*, No. 22, 1899) reports two cases in which the superior cervical ganglion was extirpated with the object of curing epilepsy. One of the patients was a microcephalic child on whom bilateral craniectomy had been previously performed with temporary success. The second case was one of a boy aged 15 years, who suffered from severe and frequently repeated attacks, apparently of traumatic origin. The immediate results of operative interference in these cases seems to have been very satisfactory, but in each instance the interval between the dates of operation and of the last report is too brief to allow of any sure conclusions. In one case this interval had lasted thirteen days, and, in the other case, only eight days had elapsed since the operation. The author states that the operation is a difficult and dangerous one, and that in exposing the ganglion it is advisable to divide the tissues very carefully in order to avoid injury to the carotid artery, the internal jugular vein, and the vagus.

(65) **The Prevention of Post-operative Thrombosis in the Veins of the Lower Extremities.**

LENNANDER (*Centrabl. f. Chir.*, No. 19, 1899) directs attention to the occasional occurrence after certain operations on the abdomen, such as laparotomy, resection of the appendix, and the radical cure of hernia, of thrombosis of the

superficial and it may be of also the deep veins of the lower limb, which thrombosis is frequently observed in the trunk of the femoral vein, and may extend into the external iliac vein. This complication, which, when it occurs, usually presents itself in the second or third week after an operation which in other respects has, as a rule, been most successful, cannot fail to cause anxiety on account of the risks of embolism of the pulmonary artery, and of pulmonary infarction, and necessitates an unduly prolonged confinement of the patient in bed. The author holds that this thrombosis is not in most cases the result of infection, but that it is due either to retardation of the circulation in the veins of the lower extremities, or to local changes in the walls of these vessels. With the object of preventing this serious complication, the author makes it a rule in his surgical practice, after every operation on the abdomen and for hernia, to elevate the lower end of the patient's bed. If the organs of the patient be absolutely or relatively healthy, the elevation need not exceed 4 inches, but should be increased for exhausted and anæmic patients and those already affected with varicose veins. In a case of an anæmic patient suffering also from weak heart and varicose veins, or of one who has been previously affected with thrombosis in the lower extremity, the end of the bed is raised on wooden blocks each about 20 inches in height. The elevation if in this degree disagreeable to the patient, should be commenced at 4 or 6 inches, and afterwards be gradually increased. If, after the operation, the blood tension be low, and the heart's action weak or irregular, the author would endeavour to increase the force of the circulation, and to strengthen the heart by subcutaneous infusion of salt solution, and by suitable tonic and stimulating medication. Much importance is attached to high elevation of the foot of the bed, and such treatment is strongly advocated, not only in surgical practice, but also in cases—such, for instance, as enteric fever, chronic enterocolitis, and chronic peritonitis—in which an anæmic condition, general exhaustion, and a morbid state of the blood, may favour the development of venous thrombosis of the lower extremity.

(66) **Nephrectomy versus Nephrotomy.**

At the meeting of the American Surgical Association recently held in Chicago (*Phil. Med. Journ.*) Joseph Ranshoff (Cincinnati) read a paper on this subject. He said that nephrotomy *per se* was an operation nearly devoid of danger. When performed on a healthy kidney, as for stone, the mortality was less than 5 per cent. When performed for suppurative diseases the mortality rose. He had tabulated records of 78 nephrotomies for pyonephrosis, exclusive of tuberculosis, published within the last three years from various clinics. Of these 78 nephrotomies, 17 were followed by death, a mortality of 21.8 per cent. In the hands of some surgeons the mortality had been very large; 4 out of 5 cases were fatal

in the Vienna clinic. Out of 6 cases of nephrotomies at the Roosevelt Hospital, 3 died. On the other hand, Israel lost only 1 out of 8, and Thornton 1 out of 12. From the same sources he had tabulated 37 primary nephrectomies with 9 deaths, giving a mortality of 24.3 per cent., and 17 secondary nephrectomies with 7 recoveries and 10 deaths, a mortality of 58.8 per cent. The advantages of nephrotomy for pyonephrosis were obvious: First, it was an operation readily tolerated even in patients greatly reduced by fever. Secondly, it permitted the surgeon to determine the condition of the opposite kidney. Thirdly, by it the saving of even a small amount of functioning kidney tissue might throw the balance in favour of recovery. In dealing surgically with a pyonephrotic kidney, statistics could guide the operator only in a general way in the choice between nephrectomy and nephrotomy. Nephrotomy was indicated in pyonephrosis, first, when the condition of the opposite kidney could not be ascertained, secondly, when the reduced condition of the patient would not permit the major operation if this were indicated. The nephrotomy was then but the preliminary step, to be followed by nephrectomy as speedily as possible. Thirdly, when the operation revealed the presence of considerable kidney tissue, and an approach to the normal on the part of the pelvis and proximal portion of the ureter. Here a latter ureteroplasty might avert the need of nephrectomy. Fourthly, when there was evidence of suspicion of disease in the other kidney. Primary nephrectomy was indicated, first, when there was a sound second kidney; secondly, when inspection of the exposed kidney showed many or large pouches that could not be successfully drained; thirdly, when there was little kidney tissue left; fourth, when an examination of the pelvis and proximal portion of the ureter made it reasonably certain that a return to the normal could not take place; fifth, in paranephritic and perinephritic suppurations where the kidney acted as a valve impeding successful drainage (Israel).

MIDWIFERY AND DISEASES OF WOMEN.

(67) **Does the Removal of the Ovaries Exert a Beneficial Influence on the Subsequent Progress of Malignant Disease?**

In a paper with this title, read in the Section of Obstetrics at the recent annual meeting of the American Medical Association (*Phil. Med. Journ.*), E. E. Montgomery, of Philadelphia, discussed the value of oophorectomy in the treatment of malignant disease of the mammary gland, and the theory that the presence of the ovaries exerted an inhibitory influence on the development of such disease. If the patient was liable to the genesis of cancer when inhibition was partially removed, would she not be much more subject to its ravages when inhibition was entirely



destroyed? This theory logically would contraindicate rather than render advisable the removal of the ovaries for malignant disease. The ovaries might exert an influence upon the circulation in the vicinity of the reproductive organs through the vasomotor system, and a careful consideration of the subject forced him to the conclusion that the apparent relief was afforded through the vasomotor system. Further experience is required to demonstrate not curability but sufficient palliation and delay in the processes of disease to compensate the patient for the discomfort of the additional operation. Such an operation would only be of service if done during reproductive activity. In discussion, F. H. Wiggin said he believed that trauma played an important part in the etiology of cancer, and that soon it would be proved to be an infectious disease. A common error was the belief that cancer would not develop until after menopause. Patients should know that the period of danger was between the ages of 40 and 50 years. All menstrual irregularities should be considered as an indication for local examination. He condemned microscopic examination long before the time of operation, as the rapidity of the growth was increased. Goldspohn thought that Emmett's operation of trachelorrhaphy was not sufficient, as only the superficial tissue was removed, and that amputation of the cervix by Schroeder's method was the best. Ries thought that it was a mistake to consider that laceration of the cervix is the causing factor in carcinoma. He agreed with Montgomery that removal of the ovaries was useless in cancer of the breast. It was folly to think of doing oophorectomy on everything, from corns to headache. Bonifield thought laceration of the cervix predisposed to cancer by prolonged congestion and irritation. Mitchell thought cancer rarely occurred in women who had not borne children or been the victims of abortion. He noted the rapid increase in the frequency of cancer. Gilliam did not think the family physician was competent to determine the presence of cancer, and that each should be submitted to the expert for diagnosis. He thought it was not laceration but the traumatism that was the etiologic factor. He did not think that micro-organisms were responsible for cancer. Careful study of injuries of the cervix produced by childbirth should be made. Every case of atypical hemorrhage should be investigated. Microscopic examination of scrapings or a fragment tissue could be done in fifteen minutes, or while the patient was under anaesthesia. He had abandoned the radical operation with extirpation of the glands as being impracticable, too difficult, and dangerous, and without good results. Uterine bougies should be inserted to aid in doing more thorough work. He considered the analogy between cancer of the breast and the uterus was an erroneous one. Montgomery thought cancer of the body occurred in 10 per cent. rather than only

in 2 per cent., as usually stated in textbooks of cases of cancer of the uterus. Intrauterine examination also should be practised in doubtful instances, the uterus dilated, the finger introduced, and the cavity explored. Infection of the wound was often due to a secondary infection, and every precaution should be taken to avoid such infection.

#### (68) Parturition during Paraplegia.

MERCIER (*Bull. de la Soc. Obstét. de Paris*, May 18th, 1899) notes that Bar has already written a monograph of great value on Uterine Cancer in Pregnancy and Parturition (1886), and that Amand Routh's Parturition during Paraplegia (*Trans. Obstet. Soc.*, vol. xxxix, 1897) is the most recent essay on another grave complication. Mercier reports a case where the two were combined. The patient was 40. In the summer of 1898, during her third pregnancy, cancer developed in the left breast. At the end of December paraplegic symptoms set in. On January 14th labour began early, at about term, and the patient was delivered spontaneously of a living child (weight over  $7\frac{1}{2}$  lbs.) at 10 P.M. The presentation was vertex, first position. During the pains the patient frequently dragged herself to the end of the bed, but could not lie down again without great difficulty. The puerperium was normal, but the patient could never leave her bed again. Any attempt to sit upright or partially upright caused intense pain, so that she could not suckle her child. On March 2nd she was admitted into hospital. There was evidence of secondary malignant disease of the liver and of the vertebral column. Death occurred three weeks later.

#### (69) Rokitsansky's Tumour; Malignant Obstruction.

CZEMPIN (*Centralbl. f. Gynäk.*, No. 21, 1899) demonstrated at the April meeting of the Berlin Obstetrical Society a specimen of what appeared to be the racemose tumour described by Rokitsansky and Lawson Tait. The clinical history was long; the patient was a girl, aged 25, subject to profuse uterine discharge. Four years ago the ovaries were removed with the uterus by the vaginal operation. As the appendages were drawn down, hundreds of minute grape-like cysts came away. Czempin ranks the disease as racemose cysto-adenoma of both ovaries. Shortly after the operation recurrence took place in the vaginal scar. The secondary deposit resembled, microscopically, the first, and, like the first, showed psammomatous changes in the minute cysts. Ultimately ascites set in, and more recently an operation was performed for intestinal obstruction. Diffuse carcinoma of the peritoneum was detected.

#### (70) Kidney Disease and Puerperal Eclampsia.

PAUL BAR (*Bulletin de la Soc. Obst. de Paris*, May 18th, 1899) relates a fatal case in a girl, aged 19. At the age of 5 she had scarlatina, but appears to have enjoyed good health ever afterwards till she became pregnant for the

first time. She continued well until an attack of severe headache occurred in the sixth month, followed by violent epigastric pain. Convulsions set in after vomiting. Next day she expelled, in hospital, a macerated foetus weighing under 2 lbs. The placenta was full of old caseous foci. The patient was bled and put on suitable diet; but the fits continued, and she died on the fourth day. The left kidney had undergone complete cystic degeneration; it was very small and light. On the contrary, the right kidney was greatly hypertrophied, with marked dilatation of its pelvis and calices. There was universal tubal nephritis. Thus the patient had lived apparently in good health with only one kidney in function, and that kidney had evidently been diseased for some time. He ranks the case with Schramm's series, where pregnancy occurred in women after nephrectomy (*Berl. klin. Woch.*, 1896, No. 6).

#### THERAPEUTICS.

##### (71) Cacodylic Acid.

CACODYLIC acid, an organic arsenical compound, has lately been occupying the attention of Continental investigators as a substitute for the usual preparations of arsenic. As far back as 1760 Cadet, Demonstrator of Chemistry in the Jardin du Roi, obtained an oily liquid from the distillation of a mixture of potassium acetate and arsenious acid. The chemistry of this body, known as "liqueur fumante de Cadet," was subsequently worked out by Bunsen (1837-1843), who showed that its chief constituent was cacodyl oxide. Cacodylic acid, As (CH<sub>3</sub>)<sub>2</sub>OOH, containing the basic radical cacodyl, As (CH<sub>3</sub>)<sub>2</sub>, or dimethyl arsenine, is a crystalline compound, soluble in water, odourless, and containing 5.4 per cent. of metallic arsenic, equivalent to 71.4 per cent. of arsenic oxide. The name cacodyl was suggested by Berzelius on account of the extremely offensive odour of Cadet's liquid. Bunsen considered the cacodyl compounds were non-toxic, but Lebahn, Rabuteau, and others, on the strength of laboratory experiments, do not agree with him on that point (*Gijzelman in Wien. klin. Woch.*, No. 14, 1899). Some twenty years ago Jochheim tried cacodylic acid in the treatment of disease, but he gave it up owing to the unpleasant garlic smell it communicated to the breath, sweat, and urine, as did also Renzmore recently on account of the sleeplessness, dryness of the mouth, loss of appetite, and eructations it produced. Gautier (*Bull. de l'Acad. de Méd.*, No. 23, June 6th, 1899) contributed a paper on the therapeutic uses of the compound. Some five years previously he suggested its employment as a substitute for liquor arsenicalis to Danlos of the Saint Louis Hospital, who treated a number of skin cases with it (*Soc. de Derm.*, Paris, June, 1896). This observer again reports favourably on its use, chiefly in old obstinate cases of psoriasis,

but he admits that cacodylic acid is not more successful in this disease *quâ* cure than other remedies. Moreover, when given by the mouth it gave rise to an allicaceous odour of the breath, and with large doses he has observed colic and exfoliative dermatitis. Most of these drawbacks were obviated by administering the remedy in the form of hypodermic injections. Gijselman (*loc. supra cit.*) found both hypodermic and intramuscular injections of cacodylate of soda very useful in acute or recent psoriasis, but of little avail in old cases. Gautier (*loc. supra cit.*) himself records good results in malaria and anæmia, but he particularly insists on the value of cacodylic acid in phthisis. He gives the details of the case of a relative, a young lady, who had been under the care of Professors Potain and Debove. She had derived no benefit from a sojourn in the South of France and creosote injections. As her condition was serious, and moreover as liquor arsenicalis did not suit her, Gautier decided to try hypodermic injections of cacodylate of soda, for the preparation of which he gives the following directions: Saturate completely 5 grams of cacodylic acid with carbonate of soda; add 0.08 gram of hydrochlorate of cocaine, and 5 drops of an alcoholic solution of creosote (creosote dissolved in 8 grams of alcohol). The creosote is added merely as a preservative. Make up to 100 c.cm. with boiled distilled water. One c.cm. of this solution, equivalent to 5 centigrams of cacodylic acid, was injected daily for a week at a time, with intervals of 10 days' rest. From June, 1898, to May, 1899, the patient's weight increased from 51 to 69 kilos; the evening temperature gradually fell; and the pulse became less frequent. There was marked improvement in the physical signs at the end of the treatment. These favourable results in phthisis are to some extent confirmed by Roustan of Cannes; but the cases treated by Burlureau were not, on the whole, encouraging. The truth is the foregoing reports with regard to phthisis are premature. More extended and systematic observation is required before any definite opinion can be formed as to the usefulness or otherwise of cacodylic acid in pulmonary tuberculosis; at this stage of the inquiry it would not be right to raise hopes which further experience may prove to be delusive. It must be pointed out, too, in this place, that the good effects of cacodylic acid are somewhat discounted by the fact that, in addition to the injections, fresh air and abundant food were important factors in the treatment of Dr. Gautier's case. These two factors may have had more to do with the improvement observed than the exhibition of the organic arsenical compound.

## (72) Sanose.

BIBENTHAL (*Therapeut. Monat.*, May, 1899) gives further details with regard to the manner in which sanose may be utilised as a food. Sanose should never be added to boiling liquids or shaken up with any fluid whatever until it is first prepared with cold, or better lukewarm,

water or milk; the mixture must be carefully stirred until it forms a thin broth. This prepared broth is now added to the food or drink as the case may be, and the whole is raised to boiling point. Sanose can be mixed with bread or biscuit, and as much as 5 to 20 per cent. can be added to bread without producing any unpleasant taste. It is important to increase the amount of salt when baking the bread. The rolls of bread sold in Berlin contain 3 grams of sanose in each, and the biscuits contain 2 grams. The amount of albumen contained in four sanose rolls and three biscuits equals 18 grams: this would be practically equivalent to a pound of meat. The bread and biscuits are being extensively used now, they have no unpleasant taste. During the process of baking, the casein and albumose undergo no appreciable chemical change. The presence of casein was demonstrated in a biscuit weighing 27.5 grams, and containing 3 grams of sanose. It was first broken up into small pieces, and then a solution of caustic soda poured over it, the mixture was stirred for half an hour, and then filtered. On the addition of acetic acid to the filtrate a thick, cheesy precipitate was formed, which is characteristic of casein. The detection of albumose is more difficult. A biscuit containing 2½ grams of sanose was treated in the same way as the preceding. On treating the filtrate with the biuret test there was a very slight reaction. If, however, 10 c.cm. of the filtrate is first evaporated, and afterwards placed in a test tube with one-fourth part of concentrated caustic soda solution, to which 2 drops of copper sulphate have been added, the characteristic violet colour is seen.

## (73) Treatment of Trachoma by Cupric Electrolysis.

In the Section of Ophthalmology at the annual meeting of the American Medical Association (*Phil. Med. Journ.*, June 24th), G. F. Keiper, of La Fayette, Indiana, referred to a number of experiments performed to prove that substances could be made to penetrate the tissues by means of the electric current. He proposed applying this to the treatment of trachoma. The method suggested was based on the following experiment. Take a carbon electrode attached to the negative pole of the battery, and a pure copper needle attached to the positive pole, and introducing the needle into a piece of meat turn on the current. On cutting the meat open the region around the needle will be found of a green colour, and chemical examination shows this to be due to the copper oxychloride which has been formed. As this substance has a decided germicidal action, it is relied upon to destroy the trachoma granules when the copper pole is applied to the conjunctiva. In the discussion Huitzinga considered that if we believed trachoma to be the result of a specific infection then this treatment deserved more than a passing notice. He believed that such a current would penetrate the conjunctiva and destroy or neutralise the cause

of trachoma, but it would not reach the disease if it were very deeply imbedded. He said that the distance between the anode and the cathode should never be less than five inches, because the amount of chlorin ions between the two poles must be sufficient to meet any demands that may be made upon them. Howe thought the treatment would probably be painful, and he doubted the ability to introduce medicines into the tissue in this way, since his attempts to produce the characteristic starch-iodin reaction had always failed.

(74) Treatment of Lupus Erythematosus. WHITEHOUSE (*New York Med. Journ.*, February 4th, 1899) reports a case of lupus erythematosus in a woman aged 52 years, cured by the internal administration of iodoform in the form of a pill taken at meals. For three weeks there was no effect, but afterwards rapid improvement took place, and the case was cured after three months' treatment. The case was a severe one of three years' duration. Reichel, at the Sixth Dermatologica Congress at Strassburg, recorded the cure of four cases of lupus erythematosus by the internal use of quinine during from fifteen days to three months. Hebra (*Wien. med. Woch.*, December 24th, 1898) recommends the following lotion to be used frequently as a compress: Alcohol, ether, spirit, menthæ piperitæ aa.

## PATHOLOGY.

## (75) Immunity in Tuberculosis.

BRUSCHETTINI (*Rif. Med.*, April 26th, 1899) recognising the difficulty of getting good cultures of tubercle bacillus, adopted the plan of injecting animals with an emulsion containing many bacilli, then, after fifteen to twenty days, when the injected animal had died, parts of the tuberculously infected organs were removed directly from the abdomen and thorax, and beaten in a mortar with distilled water. The liquid thus obtained was very rich in bacilli, and yet found quite innocuous when injected. The author injected 2 c.cm. and afterwards 4 c.cm. into himself without any bad effects. In many cases immunity was reached in the guinea-pig and rabbit, although these results were not constant, still they were sufficiently encouraging to induce the author to continue his researches in the same line.

## (76) Congenital Absence of Shoulder and Arm Muscles.

GEIPEL (*Münch med. Woch.*, March 7th, 1899) relates the case of a child 10 years of age, who showed an extraordinary absence of the shoulder and arm muscles on both sides. The muscles involved were the deltoids, supraspinati and infraspinati, serratus magnus, pectoralis major, biceps, triceps and brachialis anticus. The only other abnormality was talipes equinus affecting the right foot. The child was intelligent and good tempered. The family history was good. The child was able to write with difficulty when the pencil was grasped with both hands.