

## AN EPITOME OF CURRENT MEDICAL LITERATURE.

### MEDICINE.

#### (475) Syphilitic Stimulating Amyotrophic Lateral Sclerosis.

**BALLET** (*Sem. Méd.*, November 21st) discusses the following case: A man aged 34, of gay and sprightly but unstable temperament, as shown by the vicissitudes of his life before he came under notice in the summer of 1893, met with a severe disappointment, after which he became soured and sullen, lost flesh, and himself complained of general weakness. On September 2nd he was acting, and at the moment of retiring experienced a sort of weakness followed shortly by difficulty of speech and paresis of the right extremities, particularly the lower limb. Eight days after the arm became entirely paralysed, attacks of numbness having preceded this event. From September 20th to the 30th the left limbs were being rendered powerless, the leg being affected first as on the right side. At the same time the difficulty in articulation was increased. On October 16th the patient lay motionless in the dorsal decubitus; the orbicularis oris and muscles supplied by the cervico-facial nerve paralysed. Closing of the lips was difficult and incomplete; the saliva flowed from the mouth. The tongue moved with difficulty and could not be protruded beyond the edge of the teeth. Velum palati paralysed; deglutition of liquids only possible. Articulation of words reduced to an unintelligible grumbling. Voice raucous hoarse, and bitonal, and on attempts at swallowing terrible suffocative attacks ensued with cyanosis and impending asphyxia. The upper extremities almost completely paralysed, the right more than the left. The patient could not help himself to food or wipe his nose. The forearms were semiflexed on the arms, the hands slightly flexed on the forearm, and the fingers from their position recalling the "claw" hand. The lower extremities equally paralysed again most markedly on the right side. The patient could not remove his legs in bed nor raise them, he was totally unable to stand. The olecranon and wrist reflexes, also the patellar, were remarkably exaggerated. Much atrophy existed in the four limbs. In the hands the thenar and hypothenar eminences had nearly disappeared, the interossei were much wasted. In the forearm the flexors especially were concerned and in the shoulder the deltoid and supraspinatus. In the legs the triceps femoris and calf muscles were most atrophied. There was no wasting of the tongue muscles although paralysed. There were no sensory symptoms and no paralysis of the sphincters. It was elicited that in 1883 the patient had been treated for sores, which appeared to be specific, also again in 1890 for laryngeal sym-

ptoms. Therefore on October 20th mercurial frictions were ordered, and iodide of potassium. On November 15th the articulation had so improved that whole sentences were intelligible, but speech was still somewhat explosive. Swallowing performed more easily. The atrophy of the muscles was apparently arrested and the patient could raise himself in bed without help. On January 10th the treatment was suspended. Speech was now still more easy and there was no longer muscular atrophy visible to the naked eye. The patient could walk a little with assistance. There was still present, although improved, a high degree of emotional sensibility, the patient laughing and crying without the slightest cause. Discussing the diagnosis, the author inclined to regard the case as one of pseudo-bulbar paralysis, a little anomalous, in a syphilitic patient. The absence of sensory troubles, the very exaggerated tendon reflexes, and especially the emotional symptoms excluded a polyneuritis of specific nature. Amyotrophic lateral sclerosis was a disease of slow onset and progressive nature, therefore to be set aside. A bulbo-myelitis destroying strands of fibres in the anterior pyramids and extending to the nuclei of the bulb and cells of the anterior cornua would theoretically produce the symptoms, but the process was too diffuse to make an entirely motor affection likely, and in the recorded cases the symptoms were quite unlike those here presented. Moreover, the rapid improvement of the symptoms was against this diagnosis. Brissaud's researches connect spasmodic tears and laughter with lesions of the central grey nuclei in the neighbourhood of certain fasciculi of the internal capsule, and this emotional sensibility is a frequent factor in cases of pseudo-bulbar paralysis. Relying on these facts and the peculiar onset of the disease in this patient Ballet thought the symptoms were due to a double central focus of disease near these nuclei and appearing first on the left side then on the right.

#### (476) Acromegaly.

SUCH a case is elaborately recorded by Perring (*Journ. of Nerv. and Mental Diseases*, November, 1894) and the proposed line of treatment—based on the pathology of this affection—indicated. The patient was a woman, aged 42; father and brothers healthy; phthisis on mother's side. Her illness began at the age of 28, with failing vision, associated with menstrual irregularities, a lack of physical endurance, and headache, which gradually got worse. The joints, lower jaw, and extremities then began to hypertrophy slowly, and continued for some years till they assumed the characteristic enormous proportions. At 32 there was total loss of vision in the right eye. At 35 the gums began to recede from the teeth, and three years later, on account of pain in the jaws, fifteen teeth were extracted. It now was apparent that the lower jaw projected beyond the upper. For the past five or six years there had been attacks of palpitation with dyspnoea, and at

times very profuse sweatings. The whole physiognomy was characteristic: enlarged thickened nose and lips, elongated lower jaw, large and puffy eyelids, spade-like hands with thick sau-age-like fingers, feet broad and thickened, disappearance of hair from the pubes and axillae while flourishing elsewhere, speech slow and drawing with high-pitched voice, etc. Temperature was 97.8° F.; excessive sensibility to cold; muscular power diminished, mental power somewhat dulled, and the patient at times rather irritable. Weakness increased, with headache and pain in the lower limbs; the bladder and rectum were gradually lost control of, and the patient passed through an apathetic state into coma, ending in death. The writer refers to the published cases of acromegaly, with necropsies—eighteen in all—known to medical science. Fifteen out of these showed disease or destruction of the pituitary body, while the most careful clinical investigation has shown (according to Marie) that the remaining three were cases of hypertrophic osteoarthropathy of pulmonary origin, and simulating true acromegaly only in certain features. The conclusion is that the trophic disturbances are due to the destructive lesion of the pituitary body, and the etiology of these is explained from the results of the recent researches of Andriezen on the function of this gland in the earliest vertebrates; for example, that while being connected with the respiratory water vascular stream which irrigated the cerebral ventricles and central canal, the pituitary gland furnished some substance necessary for the proper nutrition of the nerve tissues, which is now furnished directly, as the same observer pointed out, through the blood and lymph. Perring seems to think that the most hopeful treatment of acromegaly is the administration of pituitary bodies from the lower animals, which he regrets he was too late in trying in the above case.

### SURGERY.

#### (477) Resection of the Trigeminal.

**D'ANTONA** (*Il Policlinico*, November 15th, 1894), first refers to the experimental evidence in regard to the trophic lesions following section of this nerve, and especially its ophthalmic branch. (EPITOME, November 3rd, 1894, par. 333). He then records two cases of neuralgia involving the two lower branches operated upon with success. (1) A woman, aged 25, commenced to have neuralgia in 1886. At first the pain came on in paroxysms, but later it was continuous. Other methods of treatment had been tried in vain. The third branch of the fifth nerve was laid bare by a modification of Rose's method, and traced up to the foramen ovale. A small piece of bone was then removed with the trephine. The inferior part of the ganglion corresponding to the two lower branches of the nerve was cut away. Nearly two years afterwards the

patient was in the best of health, and there was only a little anaesthesia above and below the zygoma. (2) A woman, aged 40, had suffered from neuralgia for fifteen years; worse during the past five years. Other treatment was unavailing. After the trephine was applied there was some smart bleeding, so that after plugging the wound it was decided to postpone the continuation of the operation. After 48 hours 2 cm. of the third branch were resected. Some suppuration followed, but the patient made a good recovery, and was free from neuralgia 15 months after the operation. Very distinct changes were found in the part of the ganglion removed from the first case, namely, diminution of the ganglion cells in number, and also deformity in shape, the connective tissue element being increased. The author figures a modification of Rose's trephine to facilitate its application.

#### (478) Stricture of the Oesophagus.

MEYER (*Amer. Jour. Med. Sci.*, October, 1894), discussing the treatment of stricture of the oesophagus, says that there are now three useful and reliable methods of operation at the surgeon's disposal. These are the methods of von Hacker, Witzel, and Ssabanejew-Frank. Of these, those of von Hacker and Witzel are well-known. Ssabanejew-Frank's operation is performed as follows; An oblique incision is made pretty close to and parallel with the left costal cartilages. The muscles should be bluntly separated according to the direction of their fibres. After dividing the peritoneum, the stomach is drawn forward, and a cone of about one to one and a half inch high of the anterior wall of the stomach near the fundus held outside and in front of the wound with the help of one or two silk slings. The edges of the incised peritoneum are now stitched to the stomach around the base of this cone. Thus the peritoneal sac is at once closed. Frank also advises to stitch the divided muscles to the stomach in order to strengthen and remove tension from the first row of sutures. A second incision is now made above the border of the ribs three-quarters to one inch long, and about one and a quarter to one and a half inch apart from the first one. It only penetrates the skin. The interposed bridge of skin is bluntly undermined and the stomach cone pulled underneath it and out of the upper wound with the help of the silk slings. The wound of the abdominal wall is closed and the stomach incised with the knife for about one-half inch (very readily done between the two slings), and stitched to the skin. Ssabanejew has done this operation four times. In all the cases regurgitation through the fistula so produced was prevented. Frank also has reported four cases, every one of which was successful as far as the working of the fistula was concerned. He explains the favourable mechanical effect of the operation as follows: "The external opening of the fistula is raised; only if

the stomach be filled to a great extent does the level of its contents reach the line which corresponds with the external opening." In all Frank's cases the fistula closed absolutely watertight at all times without the use of a special apparatus. Witzel's operation, according to Meyer, prevents leakage with absolute certainty, and if von Hacker's or Ssabanejew-Frank's operation be carried out properly, they give rise to the same favourable result. On this account it is advised that gastrostomy should be resorted to early in cases that will sooner or later require this operation. In cases of burn of the oesophagus, primary gastrostomy and timely dilatation of the contracting scar will most probably prevent conditions which at present generally confront the surgeon in this class of cases, and are sometimes incurable. For this class of case Witzel's method is the best, since, when the tube has been removed the oblique canal will close spontaneously, and hence no secondary operation will be needed. In cases of cancer of the oesophagus the author advises that a gastric fistula should be established as soon as the weight of the patient commences to diminish. In advanced cases, where the patient is very weak, von Hacker's operation should be performed, cocaine being used if requisite.

#### (479) Urogenital Tuberculosis.

PORTER (*Annals of Surgery*, vol. xx, No. 4) reports a case of this in a man aged 53. The condition was secondary to a pulmonary tuberculosis, the infection probably being carried by the blood stream. The author believes that urogenital tuberculosis most frequently begins in the epididymis or the prostatovesical region, and is usually secondary, rarely primary. Secondary infection occurs by the blood or lymph channels, or from neighbouring organs or tissues. Hereditary infection is probably more frequent than is generally supposed. Tuberculosis of the urethra alone is exceedingly rare, and primary urogenital infection by way of the blood and lymph channels is not impossible but it is rare.

### MIDWIFERY AND DISEASES OF WOMEN.

#### (480) Two Pregnancies in a Patient with a Large Fibroid.

REMY (*Arch. de Toccol. et de Gyn.*, October, 1894) reports the case of a primipara who entered the maternity at Nancy at term in her first pregnancy. The abdomen was filled by two oval tumours separated by a vertical groove over 2 inches wide, running from the epigastrium to the pubes. The left tumour grew harder on palpation; it measured 10½ inches vertically, the right tumour being a trifle smaller. A foetus could be felt in the left tumour. The cervix was displaced somewhat forwards, the lower segment occupied by the foetal head. On April 29th, 1881, labour set in. During a pain both tumours could be felt contracting, the left most distinctly. The mem-

branes burst during dilatation, a little green fluid escaped, the foetal heart sounds could be heard. At the end of eleven hours dilatation was complete. Half an hour later the head was still deeply engaged, and the heart sounds had ceased. The forceps was put on, and a dead foetus weighing 7 lbs. 11 ozs. extracted. Involution proceeded fairly. In February, 1883, the patient again became pregnant. The fibroma on the right presented the same appearance as before; in the middle of pregnancy, when it was still larger than the uterus, it rested on the brim. Hence the uterus was pushed up and the finger had to be passed far up above and behind the pubes in order to reach the cervix. It was expected that, after a certain time, the fibroid would cease to push up the uterus, the latter in turn pushing up the fibroid and replacing it in the brim of the pelvis. This occurred in September; the cervix was then easily accessible and in its normal place. On December 12th, 1883, the patient entered the maternity, at term; the abdomen was extremely distended and the tumour was as big as the uterus. The head occupied the lower segment, but was high up. At 5 p.m. labour set in. The pains were strong; at 8 p.m. the cervix was effaced, at 1 a.m. the waters broke, and the child was safely delivered alive. No flooding followed.

#### (481) Cancer of Ovary Communicating with Cæcum.

BRÖSE (*Centralbl. f. Gynäk.*, No. 39, 1894) reports the following case. The patient was 48, an ovarian tumour was detected, and there was suspicion of malignancy. At the operation the tumour was found closely connected with the cæcum and the subserous connective tissue around it. The growth was lifted up out of the pelvis, to allow of better inspection of its relations, but it was ruptured as it was being drawn up. A quantity of faeces mixed with clot escaped from its interior. The cancerous growth had extended, after adhesion, to the tissues of the cæcum, and ulceration had followed. The faeces which had escaped into the pelvis were carefully removed, the pelvic cavity stuffed with iodoform gauze and the end of the gauze left dependent from the abdominal wound. A large piece of the cæcum around the cancerous portion was excised and an artificial anus was formed. In the course of this proceeding the lymphatics of the mesocolon were found to be infected. The patient recovered from the operation, and the closure of the artificial anus was contemplated.

#### (482) Laceration of Recto-Vaginal Septum in Labour: Perineum Intact.

BAUDRY (*Annales de Gynec. et d'Obstét.*, July, 1894) reports the case of a primipara, aged 27, who was delivered at term, labour beginning at 10 o'clock one evening, the vertex presenting in the first position. At 3 p.m. next day the membranes broke, the head descended to the vulva and the patient suddenly felt a desire



to defæcate. The midwife recommended her simply to bear down. Then a hand was seen to project from the anus. The head was delivered and the hand easily disengaged from the wound which it had made. There was no trouble about the placenta, and but little blood escaped after delivery. Baudry washed out the vagina with sublimate lotion and then examined the parts. The vulva and perineum were intact. The anus formed a firm, dark blue protrusion. There was a wide triangular rent in the posterior vaginal wall; the apex, to the left, lay within an inch of the cervix. The base was formed by the tearing off of the vagina, so to speak, from the vulvar ring; three fingers could be passed into it. The rectal side of the wound was much smaller and circular, admitting only one finger. It now transpired that ten months previously an abscess had formed in the recto-vaginal septum and burst spontaneously. The rent was through the cicatrix of this abscess. The apical part of the laceration was closed at once with five carbolised silk sutures. The deepest were hard to introduce, but were passed with Emmet's perineal needle. The base was closed with sutures passed through the perineum. The rectal side of the wound was not sutured. On the seventh day the sutures were removed. A fistulous tract remained in the lower part of the wound; it was cauterised several times and closed entirely within four months.

**(483) Vaginal Hysterectomy for Carcinoma.** At the recent congress of the Italian Obstetric and Gynecological Society *Rif. Med.*, October 31st) Mangiagalli showed with numerous figures how the mortality in hysterectomy has gradually lessened from 25 per cent. (Bruner) to 3.3 per cent. (Kaltenbach), and how there is no great difference in mortality between hysterectomy and high amputation at the neck. The author prefers hysterectomy, and would not limit his cases to those where there is complete mobility of the cancerous uterus. He would leave the uterine annexa unless disease justified their removal. From a study of his statistics, Mangiagalli concludes that the mortality of vaginal hysterectomy for cancer of the body is superior to that of hysterectomy for cancer of the neck; that the most important prognostic element in cancer of the neck is the spreading of the process to the vagina or parametrium; compared with this the effect of the method of operation is slight in prognosis. No case should be regarded as cured until a certain number of years (varying from two to five, according to different authors) have elapsed. The author concludes that vaginal hysterectomy for carcinoma is a highly beneficial operation.

**(484) Undeveloped Right Half of Genito-Urinary Tract in Adult.**

PAUL DELAGÈNIÈRE (*Annales de Gynec.*, November, 1894) discovered a remarkable arrest of development in a woman, aged 34, during an abdominal section. The

uterus instead of having a well-marked right border was quite flat on the right side. The right tube, ovary, and kidney were all wanting. The left kidney was hypertrophied. The peritoneum was reflected directly from the uterus on to the caecum those parts being in direct contact. The anterior layer of this fold was reflected on to the parietes and joined the lower border of the great omentum to the right. The omentum and this layer seemed continuous. The malformations represented atrophy (*sic*) of the right Wolffian body.

**THERAPEUTICS.**

**(485) Tizzoni's Antitoxin in Tetanus.** BAUER (*Wiener klin. Woch.*, November 8th) reports the case of a labourer, aged 26, who was admitted into hospital at 8 P.M. on July 12th. Eight days previously the sole of the right foot had been wounded by the entrance of a splinter. The injury was dressed at the time. On July 11th he first experienced tugging pains in the masticatory muscles. On the 12th he became unable to swallow, and cramps of the neck muscles appeared. He was a middle-sized, powerfully muscular man, with moderate adipose tissue. On admission, temperature 36.8° C., pulse 78, respiration 30; complains of thirst; pupils contracted, equal, and reacting promptly. Head strongly bent backwards, and drawn to the left. Unable to separate jaws widely; tonic contraction of masseters; tongue clean, moist, freely movable. A triangular, funnel-shaped wound of right sole, with pent-up pus, the skin around infiltrated and painful. Edema of the dorsum of both feet. The wound was probed, enlarged, and cleansed, much ichorous pus draining away. Iodoform gauze introduced, and bandage applied. July 13th passed a quiet night. At 8 A.M. convulsions appeared. Head bent back and rotated to the left, and rigidly fixed. Upper part of trunk rigid, legs extended. The eye muscles, masseters, and neck muscles all tonically contracted. Mouth could be opened 1 cm. with difficulty. Lips and angle of mouth drawn down on both sides, giving a sardonic expression. All the trunk muscles rigidly contracted except shoulder and anus. Arms strongly flexed at the elbows, and knees at an obtuse angle. Articulations of hand, and fingers also flexed. Face and neck covered with beads of perspiration. The tendon reflexes much increased, the slightest touch eliciting convulsions. Temperature 36.8° C., pulse 84, soft, tension diminished. Urine examined, no albumen, no sugar. At 10 A.M. an enema of chloral hydrate, 30 grains, was given, producing immediately a diminution of reflex irritability and some desire for sleep. At 4 P.M. the rigidity of upper extremity was more marked, eyes remain closed, expression more rigid. Tonic contraction of all the facial and neck muscles; arms abducted and strongly flexed. Since 10 A.M. ten attacks of convulsions occurred. Occasionally minor attacks

occurred, which increased in intensity till the patient's head was jerked to the middle of his bed, and his feet shot right out of it. Much cyanosis during these and cries of pain. Pulse 90, respiration 60, chiefly abdominal. Urine clear at first, becoming turbid with phosphatic deposit, ammoniacal odour, no albumen nor nucleo-albumen. At 5 P.M. 2.25 grammes of Tizzoni's original antitoxin were injected, but at 6 P.M. five general convulsions of greater intensity occurred, followed by feebler attacks affecting chiefly the upper thorax. At 12.15 A.M. of July 14th 30 grains more chloral were given by enema, but notwithstanding three violent convulsions followed. Examination of the urine after the antitoxin injection gave the nucleo-albumen reaction. At 1.30 A.M. patient died in a severe attack, probably owing to spasm of the diaphragm. At the necropsy the thyroid was found enlarged, the right lobe cystic, the left colloid. Both lungs much distended, full of blood and soddened, with scattered slight hæmorrhages in their substance. A copious frothy fluid exuded from the bronchi, which in the lower lobes were dilated, and contained a tenacious mucus. Heart of normal size, right ventricle flaccid, left contracted, openings and valves normal, heart muscle pallid, reddish grey, rotten. Pleura and pericardium ecchymosed. Liver enlarged, somewhat congested. Spleen enlarged, soft; the pulp dark red and shreddy. Kidneys large, flaccid, congested; surfaces studded with clusters of venules. On section, cortex swollen and granular, pyramids dark red. Cerebral membranes congested, otherwise unaltered, brain cortex reddish violet, the medullary substance soddened and interspersed with very numerous puncta cruenta, the ventricles contracted. The author, in summing up, comments on the severe character of the case, and expresses a doubt whether the hitherto successfully treated cases have not been of a more chronic character.

**(486) External Use of Guaiacol as an Antipyretic.**

BRILL, of Unverricht's clinic (*Centralbl. f. inn. Med.*, November 24th, 1894) first refers to the unpleasant symptoms which have been noted after the external application of guaiacol. He has used the remedy in 4 cases of pneumonia, 5 of enteric, 4 of phthisis, 1 of bronchitis, and two of rheumatism; 1 c.cm. was first applied, and if without result 1.5 to 2 c.cm.; more than 3 c.cm. was never used. Smaller doses are without ill effects, but they cannot bring down the temperature. By increasing the dose, the unpleasant symptoms appear, and thus the value of the results obtained may be very doubtful. These unpleasant symptoms are profuse sweating, feeling of weakness, and even collapse. These results were such as to make him give up the use of guaiacol as an antipyretic. He then investigated the antineuralgic action of the drug. In 22 suitable cases, mostly of rheumatic pains, the external application of guaiacol was distinctly useful. The

painful parts were painted with guaiacol as rapidly as possible to prevent evaporation; it was then rubbed in, and the parts covered with gutta-percha. No unpleasant effect on the skin was noted. The antipyretic effect of guaiacol is due to its absorption through the skin and its action on the heat centres. The author concludes that guaiacol applied externally in doses of 1.5 to 3 c.cm. acts energetically as an antipyretic, but its use as such is not to be recommended, owing to unpleasant by-effects. In doses of 0.75 to 1.5 it has an antineuralgic action in the most varied diseases, and is without unpleasant consequences.

(487) **Effects of Sea Air.**

LINDEMANN (*Therap. Monatshefte*, November, 1894) gives various observations made both during a long stay at Heligoland and in the course of an ocean voyage. The most marked effect as observed in individuals accustomed to town or country air is produced on the circulation, which tested by the sphygmograph showed a slower pulse, as also higher and steeper curves. This as well as the deeper and longer inspirations the author ascribes to the stimulating properties possessed by sea air, on account of its mechanical admixture with salt and the greater force of the wind; the skin temperature is also more permanently reduced by sea than land air. As regards sea sickness, its effects are also to retard the pulse, but at the same time very much to lower its force. However, these effects rapidly pass off, and the author's sphygmographic charts show the condition of the pulse in a healthy individual before embarking, during an attack of sea sickness and afterwards, as also the continued improvement for some weeks after landing.

**PATHOLOGY.**

(488) **The Pathological Anatomy of Paralysis Agitans.**

REDLICH (*Jahr. f. Psych.*, Bd. xii, p. 385, and *Centralbl. f. allgemeine Pathologie*, November 4th, 1894) records the results of the pathological examination of the nervous system in seven cases of paralysis agitans. The spinal cord was most affected. Small patches of sclerosis were found, chiefly in the posterior columns of the cord; similar but less extensive patches were found in the lateral columns; whilst in the anterior columns they were slight or absent. The median and ventral parts of the posterior columns, near the posterior commissure, were generally most affected. All the changes were most marked in the lumbar and cervical enlargements. In the cervical region there was almost always a more or less extensive diffuse sclerosis in the columns of Goll. The sclerotic patches originated from the vessels, and were of the nature of perivascular sclerosis. Through the confluence of several small patches, where the vessels were close together, a large sclerotic patch was produced. In

the parts most affected it appeared as if the nerve fibres had gradually atrophied through the increase of the interstitial tissue. The vascular changes were of the nature of endo- or periarteritis, with extension of the inflammatory process into the surrounding parts. In the grey matter the vessels were thickened, but there were no changes around them. In almost all cases the ganglion cells of the anterior horns and of Clarke's columns were pigmented. Changes similar to those found by Redlich have also been recorded in ten cases recently published by various authors. Hence Redlich regards paralysis agitans as a disease having a definite pathological anatomy. Some of the minor changes described must be looked upon as senile. The vessels of the cord in old persons frequently show pathological changes, but these never reach such a high degree as in paralysis agitans, and perivascular sclerosis is absent or only minimal.

(489) **The Pituitary Body and the Nerve Elements therein.**

In a research on this subject by Berkley (*Johns Hopkins Hospital Reports*, 1894), a number of interesting questions in physiology and pathology are opened up. Using the hypophysis of the adult dog, the organ was studied with the aid of Golgi's method. The nerve fibres entering the anterior or glandular lobe can be seen passing into the glandular substance in company with the blood vessels; these fibres ultimately divide into fibrils, which end in free bulb-like points abutting against the glandular follicles exactly as in other secreting gland structures, the whole arrangement being very similar to the adrenal gland. No nerve cells are to be found in the substance of the anterior lobe. The posterior lobe contains both nerve-cell elements and other (ependymal) structures which are remarkably shown by the Golgi method. Interspersed with these are a few glandular follicles, which the author thinks are offshoots from the anterior lobe, and derived from the same parent buccal epithelium. The epithelial cells which remain (unmodified) in the posterior lobe are at the periphery in a layer, about three or four deep, and nearly continuous all round, apparently an enclosing sustentacular structure supporting the nerve elements proper which are lodged within. These latter comprised scattered cells, some of spindle form, as shown by Andriezen (*BRITISH MEDICAL JOURNAL*, January, 1894) by the use of the Golgi method, while others are rounded and pear-shaped, or irregular in outline. Towards the mid-region of the lobe three fusiform nerve cells form a group, which is especially distinct behind the position of the infundibular duct. The author also confirms the conclusions of Andriezen "that the pituitary in amphioxus and ammocoetes is of three-fold structure, namely, a subneural glandular organ; a duct lined by ciliated epithelium, which affords a communication between the buccal and neural cavities, and a group

of nerve cells around and at the back of the upper opening where the duct widens into the ventricular cavity," and adds the curious confirmation that essentially the same structures should be preserved in so high a vertebrate as the dog. With the Golgi method the author finds the presence of both the stellate and the mossy types of neuroglia cells, while he finds the fusiform nerve cells have processes which, through a connection with the peculiar neuro-epithelial cells (on the periphery of the duct and posterior lobe), had at one time the function of testing the water entering the infundibular canal. Indeed, their peripheral expansions are not unlike those of the mitral cells in the olfactory bulb, and suggest a similar function to the osphradial ganglia of molluscs, as was pointed out by Andriezen. The author also gives grounds for recognising the distinction between these sensitive elements and the secretory fibres, and concludes that in one of the higher vertebrates (the dog) at any rate the pituitary gland retains its twofold rôle; the secretory rôle, perhaps modified but still active, the nervous (special sensitive) function lying quiescent, though still indicating their ancestral activity in their tuft-like terminations, which resemble the mitral cells of the olfactory bulbs. The author's researches go to confirm the importance of the pituitary body in the life-history of the vertebrate, and to show its close connection both as a secretory and a sensory stricture with the central nervous system, while its connection with an oxygen-bearing water vascular stream passing through the nervous tube of ancestral vertebrata shows that its secretion has an important bearing on the metabolism and assimilation of oxygen by the brain and nervous system generally, a conclusion with which the recent researches of Vassale and Sacchi (*vide EPITOME, BRITISH MEDICAL JOURNAL*, June 23rd, 1894, par. 504) agree.

(490) **Rapid Detection of the Typhoid Bacillus.**

LYONNET (*Sem. Méd.*, November 3rd) gives the following: An ordinary culture bouillon is taken and decolorised with animal black, and 1 per cent. of phenic acid and 20 per cent. of lactose is added, with a small quantity of Congo red. Owing to the phenic acid only the typhoid bacillus and bacterium coli are able to grow in it. If the typhoid bacillus be present, the milk sugar does not ferment; the bouillon becomes cloudy but remains red. If the coli bacillus be present, the bouillon becomes cloudy, the milk sugar undergoes fermentation, and lactic acid is formed, which changes the colour of the bouillon from red to violet. Hence, if the broth remains clear, neither the typhoid nor coli bacillus is present. If the broth becomes turbid but remains red it is probably due to the presence of the typhoid bacillus. Lastly, if the broth becomes turbid but at the same time is changed to a violet colour, the presence of the coli bacillus may be inferred.