1. Depression and apathy (the commencing failure of activity in the nerve centres); and
2. Muscular weakness (the first peripheral effect).
3. Loss of fine co-ordination and equilibration (correlated to 1 and 2), and
4. The development of twitchings and irregular contractions (spasms) of the muscles (in relation to the further progress of nutritive failure of the nerve centres).
5. A want of sufficient heat production, and subnormal temperature.
6. A wasting of the body tissues (in relation to the more rapid failure of nutrition of the central nervous system).
7. A probable compensatory polypnoea, or attacks of dyspnoea (the peripheral indication of the failure of the nerve centres to assimilate oxygen).
8. A rapid progress towards death. Future research must negative or confirm these statements.

In conclusion, the author would wish to call attention to the undoubted value of studying biological problems (to the physiologist and pathologist) from the comparative and zoological standpoints, and by experiments on the lower vertebrates, to obtain light more particularly on the origin and evolutions of structures and functions and to understand their *raison d'être* in relation to the higher animals and man, following especially the method of the great Darwin.¹⁰

BRONCHO-PNEUMONIA SIMULATING ACUTE PULMONARY TUBERCULOSIS.

By J. KESER, M.D., F.R.C.S.,
Physician to the French Hospital, London.

ACUTE miliary tuberculosis is admittedly very difficult to distinguish in certain cases from typhoid fever, and matters are still further complicated by the fact that there is a form of broncho-pneumonia which simulates acute pulmonary tuberculosis. A curious example of this pathological mimicry has lately come under my notice, and a short description of the case may be acceptable:

I first saw the patient, a girl of 15, on April 16th. I heard that she had been at school in Paris, and that until April 1st she had remained in good health, with the exception that the catamenia had ceased at the end of November after being quite regular for fifteen months. The family history was bad; the father died in 1882 from tuberculosis of the lungs after three months' illness; the first child died in her 12th year from chest disease, and the second from tuberculous meningitis when 8 years of age; the third girl, born in 1874, is alive and well; the fourth is the present patient; and the fifth, born in 1878, died from diarrhoea and hæmorrhage from the bowels (tuberculous enteritis?) at the age of 2 months.

On April 2nd the patient was seen in Paris by some friends, who noticed that she looked pale and tired; she appeared to be feverish and coughed frequently. Influenza was then prevalent in Paris, and the symptoms were probably attributed to that cause; at any rate, little notice was taken of them, and the girl was not examined medically; but she got worse after a few days, and eventually came back to London. She had to wait for some time at Newhaven in a cold and draughty place.

When I saw her on April 16th she was very ill indeed. The face was flushed, the conjunctivæ injected, the breathing rapid (40), the pulse frequent (122), and weak. She complained of no pain except headache, and was not conscious of any difficulty in breathing. She was drowsy, and took little notice of what was going on around her. The tongue was covered with a dry brown crust; the heart sounds were normal; rhonchi and sibilæ were heard all over the chest, and there was some dulness over the right base, with increase of fremitus. Expectoration frothy; urine scanty, contained a trace of albumen, which later on increased to $\frac{1}{4}$; bowels constipated. No tenderness or gurgling in the right iliac fossa, no tumour of spleen, no cutaneous eruption of any kind.

On April 20th Dr. Stephen Mackenzie saw the patient with me, and examined the fundi, where some distension of the veins could be noticed. Considering the symptoms, the history of the case, and that of the family, we came to the conclusion that it was not typhoid fever, and that the most probable diagnosis was acute miliary tuberculosis; but we agreed that there was some uncertainty about the matter.

During the next eight days the patient's condition became most serious, and it seemed very likely that our worst apprehensions would be speedily fulfilled.

The temperature was quite erratic, and presented on consecutive days almost every known form of variation. On April 22nd and 23rd, for example, it remained stationary, between 104° and 105° for 18 hours; on the 23rd the maximum (105°) was noticed at 5 A.M., and the minimum (101°) occurred at 11 P.M.; on the following day the minimum (101°) occurred at 5 A.M., and the maximum (105°) at 5 P.M. Again on April 26th there were two maxima, at 2 A.M. and 9 P.M., and one minimum at 10 A.M.; whilst on the following day there were two minima, at

1 A.M. and 11 P.M., and one maximum between 12 and 2. In fact, the chief characteristic of the temperature was its great irregularity; the temperature became normal in two days after April 23th.

The pulse varied from 110 to 130, and during the last week of the illness it became markedly dicrotic.

The condition of the central nervous system was peculiar: violent delirium alternated with coma vigil, and stupor, and these symptoms persisted until May 2nd, that is, two days after the cessation of the fever. Examination of the fundi led to no positive conclusion; the veins were dilated when Dr. Stephen Mackenzie saw the patient; two days after, intense photophobia supervened without apparent local cause, and made the use of the ophthalmoscope impossible for a week. After that the fundi were again examined, but nothing of importance was found. The urine was passed in fair quantity, except at the onset, and contained from $\frac{1}{4}$ to $\frac{1}{2}$ of albumen during the last week of the disease; no casts. For three days the bowels and the bladder acted involuntarily. On June 6th the urine was normal.

Constipation persisted during the whole course of the illness, and no swelling of the spleen could be detected. Profuse sweating was noticed during the three days which followed the defervescence. The respiration was accelerated (40 to 55) as long as the acute symptoms lasted, and it frequently happened that a very deep sigh was followed by a period of comparatively quiet breathing. The patient was never conscious of any dyspnoea.

Examination of the chest showed that the heart and pericardium were not affected. The bronchial tubes and lungs, on the contrary, were the seat of important lesions; rhonchi and sibilæ could be heard everywhere, and patches of dulness appeared and disappeared in various parts, lasting sometimes a few hours only; in those areas the fremitus was distinctly increased; there never was any friction sound or any sign of fluid in the pleura; cough was frequent, but never very troublesome. The expectoration was scanty, muco-purulent, often mixed with streaks of blood; it was examined for tubercle bacilli, but, although none were found, little importance was attached to that negative evidence, as two preparations only were made; the cessation of expectoration soon put a stop to further research in that direction.

Two days before the disappearance of the fever the chest symptoms abated, and a week later they had entirely vanished. At the present time the girl is in perfect health, and, in fact, I have been much struck by the shortness of the convalescence.

It is hardly necessary to point out the many analogies of this case with acute tuberculosis of the lungs; if it were thought desirable to give a name to this kind of affection, that of acute pseudo-tuberculous broncho-pneumonia might be deemed convenient, and it would have the advantage of leaving untouched any vexed question of etiology or pathology. Several cases which it would be impossible to distinguish from this one have been described and quoted as examples of arrested miliary tuberculosis. Had my patient died, the presumption in favour of tubercle would have been very strong, and nothing but a *post-mortem* examination would have settled the question of diagnosis. I will certainly not deny the possibility of an arrest of miliary tuberculosis, but I have never observed it, and I do not think that I should be justified in describing my case as an example of it.

Typhoid fever is, I believe, quite out of the question, and I was so sure of this at the time that I prescribed, immediately after the cessation of the fever, a diet which would not have been well borne by a convalescent from enteric fever. As soon as solid food was given, the bowels, which had been obstinately constipated, began to act regularly, and there was no rise of temperature.

After excluding acute miliary tuberculosis and typhoid fever, we are driven to the conclusion that the case was one of broncho-pneumonia, but this does not constitute a complete diagnosis. The extreme gravity of the illness, the nervous manifestations, the albuminuria, the presence of migratory areas of dulness in both lungs—all these gave to the case a peculiar aspect, and suggested some sort of acute infection. Now, cases have been described by Cantani, Finkler, Lucatello, and others in which broncho-pneumonia appeared to be due to the action of the streptococcus pyogenes or of Friedländer's bacillus, and it seems very probable that the case narrated above belongs to this category, but the sputum was at first examined for tubercle bacilli, and later on no more material could be collected.

The chief clinical sign of broncho-pneumonia due to the streptococcus pyogenes is the erratic character of the pulmonary lesion; it seems to creep in all directions across the lungs, retreating at one point and advancing at another; otherwise the general aspect of the case is that of acute tuberculosis of the lungs, and until the etiology and pathology have been more completely elucidated it may be advisable to apply to these cases some general designation which prejudices nothing, not even their contagious character. In my case no contagion took place, either in Paris or here, and the danger of epidemic dissemination seems to vary considerably in different cases.

¹⁰ A future communication will deal with the subject of pituitary feeding and injection in some forms of nervous and mental disease.

As to treatment, quinine, digitalis, antipyrin, etc., seem to be worse than useless, but tepid or cold washing, whenever the temperature reaches 102° , is certainly of very great use; ice on the head, milk diet, and a small quantity of stimulants towards the end of the illness have been prescribed in my case. I also gave acetate of ammonia, with the view of increasing elimination by the kidneys.

ON ACUTE ANTEFLEXION OF THE UTERUS IN THE LATER MONTHS OF PREGNANCY.

By JAMES BRAITHWAITE, M.D.LOND.,
Obstetric Physician to the Leeds General Infirmary.

A CASE of pregnancy was sent to the Leeds Infirmary in September, 1892, with a letter from two medical men of experience, saying that they believed the case to be one of extra-uterine gestation.

The patient was aged 34, and had had five children, the last two years ago. In April, 1892, the patient believed herself to be again pregnant. In July she began to bleed a little every day but in small amount, and this hemorrhage continued up to the time of her admission in September. There was a large rounded central abdominal tumour reaching half a finger's breadth above the umbilicus, and occupying the greater portion of the abdominal cavity below. Whether this was the womb or not it clearly contained a living child, for its movements could be felt by the hand. Vaginal examination found a rounded swelling anteriorly, and the uterus apparently lying behind it, and with no continuity with it so far as the finger alone could ascertain. The finger, pressed up between the tumour and the cervix, did not arrive at any point of union. The uterus also seemed to be movable independently of the tumour to the moderate degree which its cramped position behind it admitted, for it was pressed against the sacrum. This, as it will be seen, turned out to be a mistake, but at the time it gave me this impression. The cervix was very dilatable, and I passed an index finger up, and at a height of about 2 inches reached the top of a very elongated cervix. The finger could then be turned forward into the cavity of the uterus, and the fetal head, covered by the membranes, was felt. Labour came on the same day, and was concluded satisfactorily.

I certainly thought on first examination that the child was not in the uterine cavity. In the year 1888 I was associated with Mr. E. O. Croft, of Leeds, in a similar case.

Precisely the same condition was found as in the case already described, and much doubt existed whether the child was really in the womb or not. The cervix, or the uterus, lay directly behind the tumour and parallel to it, and no continuity, or but a doubtful one, between them could be detected. I dilated the cervix sufficiently to admit of the passage of the finger, which at the height of fully 2 inches reached a ledge anteriorly, over which it could be passed somewhat downwards and forwards into the uterine cavity. The ledge was formed by the angle between the cervix and body, and it was necessarily pressed downwards to admit of access to the uterine cavity. I ruptured the membranes, and the labour was completed the same evening or next morning by my friend, but it was difficult.

At the beginning of November, 1892, I admitted another case into the ward, precisely like the other cases related. It should be noticed that in these cases there was anteversion only, without more version than enough to draw the cervix upwards a little. Secondly, that the cervix was somewhat elongated and pressed between the body of the uterus and the sacrum. It was not carried up almost out of reach as in the ordinary anteversion with pendulous belly, but it was a little elevated. Thirdly, all the cases were primiparæ, and, as might be expected, in none of them was there what is known as pendulous belly with separation with the recti muscles. Indeed, the two conditions—acute flexion and pendulous belly—are inconsistent with each other, for it is the absence of yielding in the abdominal walls which favours the flexion.

Although there are many references to anteversion with pendulous belly, there are, as far as I can discover, on record only two cases of the condition which forms the subject of this paper. Matthews Duncan, in his *Diseases of Women* (1886, p. 397), says that in advanced pregnancy we have two kinds of anteversion; one, common pendulous belly, the other extremely rare; he adds, "I have seen only one case of it in a primipara." In this case the uterus was anteverted, and could not be replaced as in common pendulous belly. It was, in Duncan's opinion, not displaced secondarily, but grew into this peculiar shape and position.

A second reference to it is in the *American Journal of Obstetrics* (February, 1890, p. 156) in which a case is recorded as one of "dextro-torsion of the pregnant uterus simulating extrauterine pregnancy." This case is precisely like those I have related except that the body of the uterus fell to the right side instead of directly anteriorly. The writer of this

paper is Dr. W. H. Wenning, of Cincinnati. The case is exactly simulated extrauterine gestation that after numerous consultations and examinations Dr. Wenning and his friends proceeded to abdominal section.

On opening the body Dr. Wenning says, to use his own words, "general surprise and consternation seized us all," for nothing was found but the pregnant uterus bent like a retort.

Dr. Wenning made a complete search into the German literature of the subject and he states that Küstner¹ relates a similar case to his, except that the patient was in an earlier stage of pregnancy. Barnes, in his *Diseases of Women* (1873, pp. 671-672) observes: "In some rare cases of early pregnancy the fundus has been locked behind the symphysis pubis in complete anteversion, forming a counterpart to the retroversion of the gravid uterus."

This anteversion of the early months has, however, no direct connection with the present subject, which is the resemblance such cases in the later months have to extrauterine gestation and the difficulty of diagnosis. It is probable that this condition is more common than has been supposed, and its similarity to extrauterine gestation must be remembered.

In every case, however, of advanced or full term abdominal ectopic gestation which I have seen—and I have now operated upon six—the uterus lay in front of the sac containing the child, not behind it. This is a most important point in the diagnosis, but there can be no absolute certainty until the finger is passed up the dilated cervix.

TOTAL EXTIRPATION OF THE UTERUS.

By MACPHERSON LAWRIE, M.D.,
Physician to the Sanatorium for Diseases of Women, Weymouth.

MRS. F., aged 66, a widow, consulted me during November, 1892, on account of pain in the region of the uterus, and a vaginal discharge. These symptoms had been in existence for about one year. The discharge was at first muco-purulent, but for three months had assumed a hæmorrhagic character, and the pain had become very severe. The periods ceased at the age of 50.

On November 20th the uterus was dilated, and an indurated, nodular mass found to occupy the upper part of the uterine cavity. This was thoroughly scraped away with the curette.

This operation was followed by great relief, but in three months the symptoms returned. The uterus was again dilated, and the growth, which had attained greater size, was again thoroughly curetted. For a second time the patient's condition was much improved, but in six weeks the old symptoms began to return. A third time the uterus was dilated. The growth was found to have developed more rapidly. With a strong, sharp curette the growth and underlying tissues were completely scooped out, till almost the whole thickness of the uterus at that part had been removed.

Severe constitutional disturbance took place after this operation, but the results seemed all that could be desired for some four or five months, when she wrote to say that the pain had recurred in a most severe form, and was accompanied by considerable hæmorrhage. It was now quite useless to propose any further palliative measures, and she consented to face the risk of complete removal of the uterus.

The operation took place on October 25th, 1893. The patient had never had any children, and the vagina was so narrow that it was necessary to divide the perineum and recto-vaginal septum down to the bowel, and afterwards to stretch the enlarged vagina by means of retractors.

The uterus was somewhat higher than usual in the pelvic cavity. The os could be distinguished towards the upper extremity of the vagina. After dragging down the uterus by means of a pair of single-toothed forceps attached to the posterior lip, it became possible to make out the cervix invested by the bladder in front. A firm hold of the posterior part of the cervix was obtained by means of a strong vulsellum, the uterus pulled down as far as possible, and the vulsellum given to my friend, Dr. Smyth, who was assisting in the operation, to hold. The vaginal mucous membrane was

¹ *Handbuch der Geburtshilfe*, Band 11, p. 541, 1889.