shown to so many medical men. I think that probably he was right and that it was a transient attack, and might be explained by the long time the cerebral substance had been pressed upon and altered by the growth of the tumour, so that it had acquired a habit which had not yet passed off, though it had manifested itself at very long intervals. I suppose we may still expect some slight attacks to recur before the brain tissue is restored to its normal functions.

III.—REPORT ON ITS PATHOLOGY.

By JOSEPH COATS, M.D.,

Lecturer on Pathology in the University of Glasgow.

THE following note was made when the tissue was fresh, immediately after the operation:—

The specimen is a soft, fleshy piece of tissue of a reddish colour; its surface is irregular, having a granular appearance, which on closer inspection looks almost papillary; at least there are a number of regular flat elevations of very small size. The tumour is a flat mass of a generally triangular shape, having somewhat the outline as well as the size of the suprarenal body. Its longest diameter is $1\frac{1}{2}$ inch; its other diameter 1 inch, and its thickness $\frac{1}{2}$ inch. The tissue is very friable, and there is no defining capsule.

A portion removed by scissors from the surface shows the tissue to be very vascular, numerous capillary vessels forming a reticulated network. At the surface the vessels show what looks like papillary projections. Between the vessels, and to some extent clothing them, are large quantities of cells which are of considerable size, and contain large oval nuclei.

A portion of the tumour was hardened in absolute alcohol imbedded in celloidin, and sections made with the microtome. The sections stained readily with logwood, alum carmine, Bismarck brown, etc.

The tissue contains numerous vessels, and each vessel is surrounded by a mantle of translucent tissue sparsely provided with cells. This tissue in specimens mounted in Canada balsam is homogeneous and structureless in appearance, but in glycerine it is seen to have a finely fibrillated character. The thickness of this mantle varies considerably, in some places equalling the diameter of the vessel, in other places much less.

The tissue generally consists of cells mostly oval or spindle-shaped. Between the cells there is the merest trace of intercellular substance consisting of reticulated fibres. The papilliform appearance noted in the fresh state is not borne out in hardened specimens; and it was due, doubtless, to the fact that at the torn edge of the tissue, the vessels with their mantle presented themselves individually.

From the character of the tumour, it may be regarded as a spindle-celled sarcoma, but taking into consideration the mantle around the vessels, it belongs to the group Plexiform Sarcoma.

THE TREATMENT OF PURULENT PERICARDITIS BY FREE INCISION.

By P. DAVIDSON, M.A., M.B.,

Honorary Physician to the Infirmary for Children, Liverpool.

THE case related by Dr. Bronner in the BRITISH MEDICAL JOURNAL of February 14th seems to me to have been a case of pyæmia, and possibly the primary seat of the infection may have been about the cæcum or vermiform appendix—a common site of inflammation in children.

The following case resembles his in several points, in the occurrence together of pleurisy, pneumonia, and pyopericarditis and also in the character of the pneumonia—sometimes called "wandering pneumonia;" again, in the rise of temperature after the opening of the pericardium.

R. E., a boy, aged 6 years, was brought to the Infirmary for Children, Liverpool, on July 9th, 1890. Three weeks before admission he had knocked his bare foot against a stone, and a week after that a swelling appeared on the right side of his chest. (He had acute necrosis of the third metatarsal bone, and a subperiosteal abscess over the eighth rib on the right side.)

On July 12th, when I first saw him, a pericardial rub could be heard, and pleuritic friction over both lungs. He had also dulness, tubular breathing, and crepitations at the apex of the right lung. Three days after, these signs had disappeared from the apex, but had appeared at the base of the lung.

On that date (July 15th), the pulse being 144, respirations 52, and temperature 103° F., as there was considerable dyspnoea, and at the same time marked increase in the cardiac dulness, the pericardium was explored with a hypodermic needle, but without result.

On July 18th the pericardium was again explored, and pus obtained. An incision was then made in the fifth interspace, and eight ounces of pus evacuated. A drainage tube $3\frac{1}{2}$ inches was inserted. The operation seemed to give considerable relief, but on the following day the temperature rose to the highest point it had yet touched (104° F.). The patient lived seven days after the operation, and finally died of syncope.

At the necropsy there were found general adhesions of the lungs to the chest walls and to the pericardium; a small quantity of seropurulent fluid was in each pleural cavity. There was a patch of consolidated lung tissue in the lower lobe of the right lung. The heart was thickly covered with lymph, but was not adherent at any point to the pericardium. There was about a drachm of pus at the back of the pericardial sac.

In sharp contrast to the above case is the following, in which there was no suspicion of septic infection:

R. A., a boy, 6 years and 9 months, was brought to see me at the Children's Infirmary on May 12th, 1890. He had for a fortnight suffered from cough, feverishness, and pain in the left side. His pulse was 120, respirations 40 per minute, and temperature 102.8° F.

On examining his chest it was found he had the usual signs of pleuritic effusion on the left side, dulness on percussion, distant respiratory sounds, etc., and his heart appeared to be pushed to the right of its normal position. An exploratory puncture was made into the left pleural cavity with a hypodermic needle, and pus obtained. The patient was sent to one of the wards as a case of empyema. On the following day I made a free incision an inch or more below the inferior angle of the scapula, and evacuated 10 ounces of pus, along with large masses of thick lymph. A large rubber drainage tube was inserted, and the wound dressed with perchloride gauze and perchloride wood wool.

After the operation the temperature became normal, the pulse fell to 96, and the respirations to 24 per minute. On the second day, however, the temperature rose a little, still more on the fourth and sixth days. At first this was thought to be due to some defect in the drainage, and this was carefully attended to. No improvement taking place, the heart was now more carefully examined. The cardiac dulness seemed decidedly enlarged, but the heart sounds were distinct and clear. Percussion, on subsequent occasions, showed an increasing præcordial dulness, and on May 24th it reached, at the level of the nipple, from one inch to the right of the right border of the sternum to an inch beyond the left nipple. I therefore determined to explore the pericardium, which I did in the fourth interspace, one inch from the left border of the sternum, and drew out pus. An incision was made at the same spot, and a director passed into the pericardial sac. On pus appearing in the groove, a knife was passed down the groove, and the deeper part of the wound enlarged. Several ounces of creamy pus flowed out. A moderate-sized drainage tube was inserted.

The operation was immediately followed by a fall of temperature, of pulse, and of rate of respiration. On the third day after opening the pericardium the temperature was 98° , pulse 96, respirations 24 per minute, and these figures remained more or less constant during the next five weeks, except during an attack of diarrhoea, and again after a premature attempt to remove the drainage tube. The empyema took about five weeks to heal, so also did the pericardium. The patient was discharged from the hospital on July 13th.

I showed him on February 12th, 1891, at a meeting of the Liverpool Medical Institution, and he was then in excellent health, having no symptom referable either to the heart or lung. He had been attending school during the winter.

In this case effusion of lymph probably occurred over the

pleural and pericardial surfaces about the same time, but formation of pus took place sooner in the pleural cavity than in the pericardial. I have observed this sequence in other cases.

I think it must be a rare event for pus to make its way from the pleural sac into the pericardial, as has been suggested by Dr. Bronner. I had under my care some time ago a boy, aged 7, who had 10 ounces of pus within the pericardium, and there were good grounds for believing from the history of the case that the pus had been there nearly three months. If the pericardium can so successfully retain pus probably it will still more successfully resist the invasion of pus.

In the case of R. A. recovery was much less rapid than in the cases reported by Rosenstein and West, but in this case the presence of an open empyema of the left side may partly account for the delay in the adhesion of the pericardium.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PUERPERAL PNEUMONIA.

PNEUMONIA is a very rare and a very grave complication of the puerperal state. That it is rare may be gathered from the fact that Grisolles, who has directed attention to the subject, was able to collect only fifteen cases, and that it is dangerous, by the statistics, which show that of these fifteen eleven ended fatally. The report of the Collective Investigation Committee, which deals with more than a thousand cases of acute pneumonia, does not include one intercurrent with pregnancy; and there is a singular absence of pneumonia among pregnant women in the recorded epidemics of this disease. Even in two volumes of the *Medical Digest* reference to a single instance of puerperal pneumonia is not to be found, but possibly in the third instalment of this interminable work Dr. Neale has indexed the condition. Four cases were reported in the *BRITISH MEDICAL JOURNAL* in 1889; one patient died, the others recovered, but all presented serious and severe symptoms. Dr. Angel Money has reported¹ from the wards of University College Hospital a case of pneumonia complicating parturition, but as in this instance purulent pericarditis—which possibly was the first factor in the morbid process—existed, the case can hardly come into the category of puerperal pneumonia, pure and simple.

The following example of puerperal pneumonia is remarkable chiefly for the absence of acute or serious symptoms. The patient was a primipara, aged 32. She complained of violent headache and short hacking cough. No rigor had occurred. There was no rise of temperature, and the pulse was not over 80. The urine was free from albumen. She was exceedingly nervous and despondent. No evidences of pneumonia were observed for two days, when she complained of stabbing pain under the right breast, and began to expectorate copious rusty-coloured sputa. On this day the temperature rose to 102° F., and the pulse to 100, but throughout the remainder of her illness temperature and pulse were scarcely affected.

Two days later I was able to detect definite physical signs of pneumonia. An area of well-marked tubular breathing was then found near the seat of pain. The temperature was now 99° and the pulse 80. Next day labour at full term set in, and, finding the head in the cavity of the pelvis, I at once gave chloroform and delivered with forceps, the operation lasting about three minutes only owing to the great elasticity of the perineum, which allowed the head to pass without the slightest laceration. The placenta followed quickly. Immediately after delivery the general condition was excellent, and twelve hours later the pulse rate was 76, and the temperature 99.2°. Loud pleuritic friction, which lasted several days, was heard, after the lung consolidation was resolved, over the same area. The mother made an uninterrupted recovery, and the infant showed no signs of transmitted pneumonia.

Broadstairs.

THOS. F. RAVEN, M.R.C.S., L.R.C.P.

AN EFFECTUAL AND EASY METHOD OF PLUGGING FOR EPISTAXIS.

Cut a ribbon of lint 7 inches in length and 1 in width. Place this on a table with one end at the edge of it. Take a director and place it on one half of its length, with a probe placed in its groove; now fold the other free half of the lint over both probe and director. Grasp the whole firmly and pass them through the nostril downwards and backwards as far as they will go. Liberate the probe from the director and press its point backwards, so as to prevent the lint following the director during its extraction. By a rotatory motion the probe itself can then be easily withdrawn. The lint may remain twelve or eighteen hours before it is removed. It is highly important to arrest epistaxis as speedily as possible, as it is often so profuse that life may be endangered; the aged may never be able to recoup the loss of blood.

Sutherland Avenue, W.

H. A. RAWLINS, M.R.C.S.

A CHARACTERISTIC ORGANISM OF CANCER.

OF late pathologists have devoted much attention to the finding of a specific organism of carcinoma. In our own country, as the reports of the Pathological Society will show, allusions have on several occasions been made to these protozoic organisms found in carcinoma. Jonathan Hutchinson, jun., I think, was the first to draw the attention of the Society to these bodies. He investigated especially cases of so-called Paget's disease of the nipple. Lately a paper was read by Dr. Russell, who describes such moneric organisms in carcinoma, and considers them to be "characteristic."

Against such a view, I feel myself justified to raise a decided protest. I have, of course, not seen Dr. Russell's specimens, but, from his clear description and illustrations, have no doubt that his organisms are absolutely identical with those demonstrated at Berlin, and with what I have seen at other times previous to the Congress.

These organisms—whether we call them protozoa, or psorospermiae, or sporocysts, or what not—occur, and even frequently, in other diseases, even in apparently healthy tissues.

1. Kölliker years ago found them in and amongst the tissues of the skin, under healthy and diseased (not carcinomatous) conditions.

2. In rodents these organisms are very common, and not infrequently found in large masses, especially in the liver, but also in the intestines. They react beautifully to Gram's method of staining. However, in most cases they apparently do not affect the general condition of the animal, or cause any local disturbance histologically to be compared with carcinoma. While working in Koch's laboratory I found that most rats, guinea-pigs, or rabbits were affected in this manner.¹

3. In and between the fasciculi of the pig's muscle they are not infrequently found. Here, again, they apparently cause no trouble. In Oscar Israel's *Practicum* a good illustration is given; and Virchow, when discussing actinomycosis, never fails to demonstrate the psorospermiae in the pig's muscle to his listeners. It was in his laboratory that I first became familiar with these monadinae. The objection may be raised that these are different species. However, having seen and studied them, and having benefited by their comparison with the specimens of others, I do not consider this objection valid as far as the microscope can decide. The artificial cultivation of them has as yet not succeeded.

4. Dr. D. Cunningham, in Part I of the *Scientific Memoirs by the Medical Officers of the Army of India*, gives a lucid and well-illustrated description of a peculiar parasitic organism in the tissues of a Delhi boil. Anyone reading this paper will at once perceive that here we have the same protozoon, which reacts to aniline dyes in the same way as Dr. Russell's "characteristic organism of cancer." Dr. Cunningham's drawings should be compared with the coloured plate appended to Dr. Russell's paper. Dr. Cunningham's "sporocysts" are absolutely identical with the specimens shown at the Berlin Congress, and, as far as I can see, with Dr. Russell's fuchsine bodies.

5. In ordinary chronic ulceration I have from time to time observed the same organisms.²

¹ Cf. also *Baumgarten*, vols. i and ii.

² Cf. also Dr. Russell's paper.