fibrous tissue passing through it. The small arteries were much thickened, especially in their muscular coats, though the fibrous and inner coats were also affected. The retro-peritoneal glands showed similar appearances, except the fibroid patches were more prominent, and the endarteritis obliterans more marked. The condition apparently was of a chronic inflammatory character, most probably with a specific origin.

SOME CASES OF HYDATID DISEASE.

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The following cases of hydatid disease are interesting in many ways, especially the two lung cases, which throw some light on the questions dealt with by Dr. A. J. Wood in his valuable paper in the August number of this Journal.

The Wimmera has a justly bad reputation for the prevalence of hydatids, and one need not live very long here to see how that reputation has been gained, and is being sustained. In addition to the sheep on the large stations, almost every farmer has a small flock, and, of course, dogs. From the nature of the district, the few creeks and rivers there are run very slowly, and in the summer do not run at all, but consist of a chain of waterholes, so that there is very little chance of contaminated water being swept onwards. The scarcity of natural streams has necessitated the sinking of dams and the construction of water channels in the irrigation areas. Hence, it follows that practically all the Wimmera water supply, once it has become contaminated, remains so during the life of the ova. If the streams ran rapidly, we would not have nearly so many cases of hydatid disease, in spite of the sheep and dogs. Another factor of some importance is the great heat of the summer, which causes those working in the fields to be glad to relieve their thirst anywhere.

It is unfortunate no definite figures can be given as to the number of cases occurring throughout the whole Wimmera. Judging from my experience, it must be very large, and it would be of great interest if each medical man in this part of the colony made an annual report to the Society of the number

of cases be met with. Contrary to all experience, in my own practice so far, lung hydatid is more frequent than liver hydatid.

Case I.

H. L., æt. 28. This patient was admitted to the Horsham Hospital with an attack of pneumonia at the left base, and gave the history of having spat up hydatid skins some years before. He recovered from the pneumonia, but the breathing at the left base remained very weak, and there was relative dulness here. Still there was no definite area of dulness, and the breathing, though weak, was not absent at any part. There was no difference in the measurement of the two sides, and there was no displacement of the heart. He was kept under observation for some time, during which no change occurred in the lung signs, but he was worried by a cough, and became short of breath on very slight exertion. He himself was convinced there was something in the chest, as he said he could feel it move about. After much hesitation, I needled the left base, and, after several insertions, drew off clear hydatid fluid from a spot about two inches from the spine. No coughing was excited by this procedure. A few days later (June 15, 1898), I excised two inches of the ninth rib, and found the lung adherent to the chest-wall; and on incising it, opened a healthy hydatid cyst about the size of an emu's egg. This was removed, and a drainage-tube inserted. He took the chloroform very well, and had no coughing during the operation. Three days afterwards, the discharge became offensive, and I began to syringe the cavity with dilute carbolic lotion, which caused a violent paroxysm of coughing, the patient stating he could taste the lotion. There was evident free communication between the sac cavity and a bronchus, and the patient could tell the different volatile bodies, such as chloroform, brandy, peppermint, &c., injected with a few drops of water into the cavity. His convalescence was, unfortunately, prolonged by an attack of erysipelas, and later by a severe hæmoptysis. At the present time, he is quite well, with the opening closed. His only trouble is that perhaps once a week he has a burst of coughing, which ceases with the expectoration of about a teaspoonful of pus, which evidently collects in the now almost closed sac cavity. The breath

sounds over the left base are good, except at one spot, where the breathing is bronchial, and ægophony is heard.

Case II.

A. H., æt. 8. I saw this boy first a year ago, when there were clear indications of a cyst at the left base; the area of dulness was rounded, with the dulness gradually shading away, and there was complete absence of breath sounds over the centre of the dull area. There was no heart displacement, and no difference in the measurement of the two sides. His cough was troublesome, and any exertion winded him easily. Some weeks later, in a fit of coughing, he expectorated a number of small hydatid cysts, and seemed much better, losing his dyspnœa almost completely. The physical signs, however, altered very little, and crepitations could be heard round the area of dulness. He kept in very good health till two months ago, when the cough became very troublesome, and the sputum blood-stained. Pyrexia set in, and the child looked very ill. His parents were unwilling to allow surgical interference, but were at last prevailed upon, and on September 22, 1898, I operated. The incision was made over the area of dulness, and about two inches of the tenth rib were removed. On cutting through the costal pleura, the lung was found adherent at the outer part of the opening only, and was therefore stitched to the costal pleura with catgut. A scalpel was then inserted into the lung, and a rush of pus and broken-down cysts followed, and at the same time violent coughing, with expectoration of the same materials in small quantities. No attempt was made to evacuate the cavity, but a large drainage-tube was inserted, through which he continued to cough pus and cyst *débris*. The subsequent progress was unimpeded, and after a few days his cough almost left him, and at present he is running about with a drain tube into the cavity. This will be removed very shortly. He, too, can recognise volatile substances if a little is introduced into the opening, and in him, too, any attempt at irrigation causes paroxysms of cough from flooding of the lung.

In both these cases there was evidently free communication between the sac cavity and one or more bronchi, and this apparently is the rule in almost all cases of lung hydatid. Hence

the danger of exploring with a needle any suspected case, as the fluid leaks very easily through even the fine opening made by a hypodermic needle, as may be seen on needling a liver hydatid after opening the abdomen. If a small quantity thus exudes and excites coughing, the cyst is very apt to rupture at the site of exploration from the strain, and the lung is at once flooded. From the delicacy of the adventitious sac, a lung hydatid has very little support. In the first of these cases I needled against my better judgment, and though no bad effect followed, I shall never attempt such a procedure again. If I had read Dr. Wood's paper before the first operation, I would not have used a drain tube, as the cyst was clean, and risk of contamination from the air passages is small. If suppuration should occur, it would be very easy to open the cavity again. It would be interesting to know if all these cases completely recover, or if, as seems possible, the almost obliterated cyst cavity may continue to fill with pus, which is discharged at intervals, the condition being much the same as a single bronchiectatic cavity.

These cases make one think of Lauder Brunton's caution as to the use of ether in operations on the lungs, where the cautery may be used.

Case III.

H. H., æt. 36, sheep drover. This man was being treated in the hospital for gonorrhœal rheumatism. He was a big stout man, apparently in excellent health. One morning, May 11, 1897, while in bed, he was seized with violent pain in the region of the gall-bladder, and this was followed by several rigors. Examination did not reveal anything except tenderness over the liver, and no enlargement of that organ could be made out. He continued in acute pain with exacerbations of great intensity, in which he would vomit and sweat. The pain could only be controlled by morphia, and I considered I had to deal with a case of gall-stone colic, especially as the next day he became jaundiced. On the second day, too, his abdomen began to distend, and ceased to move with respiration, and the patient sank into a semi-unconscious condition, from which he never roused before his death early on the fourth day.

A post-mortem examination showed the liver occupied by the largest hydatid cyst I have ever seen ; there was very little fluid, but the cavity was closely packed with degenerating daughter cysts. There was a rupture of the sac into one of the large bile ducts, and a cyst was found blocking the common duct.

The main interest of this case, apart from its rapid termination, is the fact that, with such a large cyst involving the destruction of a large part of his liver, there were no symptoms pointing to its presence before the fatal illness.

Case IV.

A. A., æt. 8. This little girl attended the Horsham Hospital early in 1897 for a swelling about the size of an egg just behind the right sterno-mastoid. It was diagnosed as a hydatid cyst, and was aspirated in my presence. Clear fluid was removed, and the tumour disappeared. In August of the same year, she returned with the swelling in the same place, and of the same size as before. An incision was made, and a single healthy hydatid cyst, full of clear fluid, removed.

Case V.

Mrs. L., æt. 26, consulted me in August 1897 for a swelling in the epigastrium, presenting all the signs of a hydatid. She stated she had been twice "tapped for hydatids" in the same region, the first time thirteen years before, and again eight years ago. On each occasion about a pint of fluid was removed. On August 3, 1897, I opened the abdomen through the right rectus and found a large hydatid cyst in the liver directly under the incision. This was treated by Lindemann's method. The contents were degenerating daughter cysts, but there was no suppuration.

I have reported these last two cases because both had been tapped without killing the parasite. There is no doubt about this in the neck case, though possibly in the liver case the tapping had dealt with cysts other than that found at the operation. The cyst found was certainly dead, but could not have been so for long, as the patient had noticed a steady increase in its size during the year, and this was not because of suppuration.