"l'extirpation de la membrane germinative et la suture de la périkystique." The only case, however, in which he mentions that "l'extirpation totale" was practised was that of a cyst the size of a duck's egg, which he removed from the left orbit. In the 23 cases of liver hydatid where enucleation was performed, the enucleation was in every case of the ectocyst only.

As to the origin of the ectocyst, Posadas states that the hydatid "has developed a fibrous limiting sac, named the pericystic layer, the origin of which is due to the inflammatory reaction and to the process of encystment determined in the tissues by the foreign body." He further states that the fibrous coat is intimately fused with the organ in which the neoplasm rests, since its constitution is due to the proliferation of part of its elements. This intimate fusion certainly was not present in my case.

In reading the article by Posadas I was struck by the fact that, out of the 23 cases in which extirpation of the germinal membrane was practised, 20 were 13 years of age or under, the age of the youngest child being 3 years. In 18 of these cases the cyst was single and located in the right lobe, while in the remaining 5 cases two cysts were present—one in the right lobe and one in the left lobe. In the textbook by Ashby and Wright on *Diseases of Children*⁴ it is stated that "Hydatid cysts are not uncommon in later childhood." My patient was a child of 13 years; but the few cases of hydatid cyst which I have previously seen have all been in adults. The child does indeed seem more likely to be infected than the adult, owing to the want of care of the child in selecting its vegetable food, its indifference as to the absolute cleanliness of the food which it eats, and, more important still, owing to the readiness with which children allow dogs to lick their faces.

In publishing this case I have no wish to appear to be advocating the wholesale total enucleation (as I have described it) of hydatids of the liver. Here let me again emphasize the opinion that no operation should be technically described as total enucleation or enucleation of the entire cyst if the ectocyst is left behind, putting quite out of the question for the moment whether it is ever advisable to attempt the removal of the ectocyst. My primary object is simply to describe a case where the ectocyst was successfully and easily removed and without any "grave hæmorrhage"⁵ occurring. I think I may look upon these cysts as being cysts in a normal condition at a certain stage of development, and therefore may claim that any other similar cysts could have been in a similar manner enucleated.

At the annual meeting of the British Medical Association in 1910, Mr. C. MacLaurin, Honorary Surgeon to the Royal Prince Alfred Hospital, Sydney, read a paper on Hydatid Disease of the Liver.⁶ Having expressed his opinion that marsupialization is the operation of choice, he criticizes Delbet's operation—namely, opening the cyst, removing the endocyst and obliteration of the cavity left by sutures, in that it is "excessively difficult—in my experience, usually practically impossible without a large incision," and that "there is the danger of implantation of live scolices into the adjacent liver tissue." Applying this second criticism to the operation which I have described, I may say that if the ideal result is obtained—namely, the removal of the cyst unopened, then all chance of infecting the peritoneal cavity or liver tissue with scolices is absolutely avoided, and thus I should say that, in picked cases, it is superior to Delbet's operation, which would be more correctly described as Knowsley Thornton's operation, or to any other operation, as far as the question of infection is concerned. In my case, as I have said, the second cyst ruptured just as I was completing the enucleation, and thus the ideal result was not obtained. With a little more delicacy in the later stages of the operation, I feel confident that I could have obtained a pair of unopened cysts. I was putting too much reliance on the strength of the ectocyst while I was completing the enucleation, and did not allow for the presence of a weak spot.

If I were asked to formulate rules as to when it is justifiable to attempt this total enucleation, I should say: The cyst should be of moderate size—it is impossible to make dogmatic statements as to its exact size; it should be a cyst in which no obviously active intracystic or pericystic inflammatory changes have taken place; it should be a cyst whose wall at some part comes very near the

liver surface. Regarding this latter point, in the case of a cyst lying deeply in the liver substance the operation would be rendered difficult and the view would be obscured by the hæmorrhage from the liver substance incised to approach the cyst. Again, a moderate sized cyst, lying deeply in the right lobe of the liver, which has given rise to no signs or symptoms beyond some slight enlargement of the lobe, is not likely to be diagnosed as a cyst while it remains of moderate size. The cysts which I met with in my case were cysts typically suitable for enucleation. It seems to me that hydatid cysts met with in children are more likely to be suitable for treatment by the method described in this paper than the larger cysts met with in adults, since the cysts in children are usually smaller, younger, and less frequently altered by acute or chronic inflammatory changes.

MacLaurin, in his paper referred to above, does not mention this method of treatment, and yet among the many cases of hydatid cyst dealt with in Australia one would expect to find occasionally cases similar to mine in which it would be justifiable to practise the true total enucleation. Although textbooks emphasize that "grave hæmorrhage" will occur if the ectocyst be removed, and although such hæmorrhage would occur frequently if cases were taken at random, yet I do not remember having read of a case where the removal of the ectocyst has been attempted, successfully or unsuccessfully, in a case of hydatid cyst of the liver. I should be very much obliged if any one who may read this paper would be kind enough to give me information on this point.

I showed this case for diagnosis before operation at a post-graduate demonstration at the hospital, and some weeks later I showed the case, with the macroscopic and microscopic specimens obtained, at a clinical meeting of this society.

REFERENCES.

¹ Binnie's *Operative Surgery*, fifth edition, p. 479. ² Moynihan's *Abdominal Operations*, second edition, pp. 578-586. ³ Posadas, *Revue de Chirurgie*, March, 1899. ⁴ Ashby and Wright, *Diseases of Children*, fifth edition, p. 204. ⁵ Rose and Carless, *Manual of Surgery*, seventh edition, p. 1057. ⁶ MacLaurin, Hydatid Disease of the Liver, annual meeting of the British Medical Association, 1910, *BRITISH MEDICAL JOURNAL*, October 1st, 1910.

A METHOD OF OPERATING FOR RADICAL CURE OF INGUINAL HERNIA.*

BY

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IN describing this method of operating for radical cure of hernia, I do not suppose I am inventing a method which has not been followed before, but I am not aware that it is a recognized procedure, and as in my opinion it is easier and in some ways more efficient than some of those generally followed, it may be worth while putting before you.

It is believed by many surgeons that the predisposition to the first occurrence of hernia is due to the fact that there is a slight pouch or dimple of the peritoneum, left at the internal ring at the time of the occlusion of the infundibuliform process, and that a recurrence after operation for radical cure is due to the incomplete occlusion of the sac at the neck, so that a similar pocket or dimple remains.

In order to overcome this, all sorts of different methods have been advocated to deal with this sac and its neck, such as simply pulling it down and tying it, tying the sac and twisting it and turning it up under the aponeurosis, and so on, all of which in many cases may be quite successful in attaining the object aimed at, but are all done without the operator having the opportunity of actually seeing the neck of the sac, and being able to know for certain that he has succeeded in his attempt.

There are many cases, however, in which a condition exists, to those who look for it, which make it obvious that none of these methods will do away with the trouble at the internal ring. In long-standing herniae the ring of peritoneum at the neck of the sac (or at the internal ring) has become thickened and densely adherent to the structures round it, forming quite a firm ring of tissue,

* A paper read before the Witwatersrand Branch of the British Medical Association.

and no amount of pulling down or twisting will separate it from these structures. If this is not successfully done the dimple remains, and the predisposing cause remains, no matter how carefully the abdominal walls and external ring may be repaired.

Another difficulty met with in the ordinary methods of operating is to find the sac and separate it, embedded as it is among the tissues surrounding the cord, a process often causing much tearing and separation of structures.

I suggest, therefore, the following method, which will obviate all these difficulties:

The skin incision begins just internal to and above the spine of the pubis, and runs upwards parallel to the fibres of the aponeurosis of the external oblique from which the skin and subcutaneous tissue is raised. The pillars of the ring having been clearly defined, the external oblique is split up far enough to give sufficient room. The cord and structures covering the sac is seen lying in its place and must not be touched. The lower margin of the internal oblique is now seen and is retracted upwards. The peritoneum (not the sac) is now opened from the internal ring upwards. In almost all the cases operated upon the internal ring is very much approximated to the external by the dragging of the herniated gut, so that there is plenty of room above it, but if there is not enough the incision of peritoneum may be carried down on the outer side of the ring. When the abdominal cavity is opened the neck of the sac can now be seen from the inside. If omentum or other structures are adherent they can easily be separated or drawn out of the sac. The lower end of the incision through peritoneum is now carried down to the neck of the sac and round it, so that the abdominal peritoneum is now entirely separated from the sac, just as the hand of a glove would be separated from a finger if the latter were cut off at its junction to the palm. The abdominal peritoneum is now closed with continuous suture as in any other abdominal operation.

The sac has now to be dealt with, and the neck may have to be carefully dissected off the fibrous ring I spoke of. The left finger is passed down into the sac, which is drawn up round it with forceps by the assistant and can easily be dissected off swabbed out of its bed with very little disturbance of surrounding tissues. The position of the deep epigastric artery must not be forgotten in dealing with the neck. I usually suture the edge of the internal oblique down into the groove of Poupart's ligament as far as I am able. Whether this is much real use I am not prepared to say. The edges of the external oblique are drawn together with a continuous mattress suture and overlapped or not according to the fancy of the operator. I think, where the muscles are very lax, overlapping is certainly useful in making a thicker and stronger wall.

As I have said, I do not claim that this method has never been used before, but I have been adopting it for some time, and I like it better than any other I have tried. It is much more rational, I think, as one is able to see all the time what one is doing instead of working in the dark. This is especially useful in those cases where the fibrous ring is present of which I have spoken, and which I do not think it is possible to obliterate otherwise.

THE annual report of the Surgeon-General of Trinidad and Tobago for the year 1911-12 states that the total population at the last census (1911) of the colony was 333,552, as compared with 273,899 at the census of 1901. The Indian community accounts for nearly one-third of the total population, and increases apparently at a relatively greater rate than the general population. The birth-rate was 34.65, and the Indian birth-rate exceeded that of the general population by 2.31. The gross death-rate recorded was 23.36, and there was a difference here of 4.03 in favour of the general population as compared with the Indian section. From the reports furnished by the medical officers, and from those of the wardens on the health of their several districts, the medical year appears to have been uneventful, epidemic disease was absent, and there were no features of special interest recorded. The total number of patients treated in the medical institutions of the colony was 16,934, as against 15,896 during the previous year, and there was a daily average of 2,121 patients under treatment in them. The Colonial Hospital has accommodation for 320 beds, and a small isolation hospital in two sections has been provided. During the period under review 6,539 cases were treated, 5,511 were discharged, and 718 died.

EIGHTY-FIRST ANNUAL MEETING

OF THE

British Medical Association.

Held in Brighton on July 23rd, 24th, and 25th.

PROCEEDINGS OF SECTIONS.

SECTION OF LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

A. J. HUTCHISON, M.A., M.B., Brighton, President.

PRESIDENT'S INTRODUCTORY REMARKS.

AFTER a few initial observations the President said: The first duty of your Committee was to draw up a programme for the three days of meetings of the Section and to fix on subjects for discussion. After careful consideration we chose for to-day's discussion the technique and after-treatment of the radical mastoid operation. This is a subject which, although of the greatest interest to us, has, curiously enough, not been set down for formal discussion at this Section of the British Medical Association for many years. Modifications of the technique are frequently being introduced, varying methods of dressing suggested, new drugs brought forward to hasten the healing by stimulating the growth of epithelium and so on; we therefore thought that a discussion on all such points could not fail to be most interesting and instructive.

With regard to the subject for Thursday, there seems to be in the minds of several members of the Section some misgiving or doubt as to whether it is of sufficiently wide scope or sufficiently great interest and importance to be worth a formal discussion. I have been asked the question, "What is there in 'The Care of Patients after Nasal Operations' to discuss?" I am quite willing to take upon myself the responsibility of having suggested the subject to your Committee, and I should like briefly to touch on some of our reasons for selecting it.

In the first place, we all know from bitter experience that after a slight operation on the nose undertaken to relieve a comparatively trivial discomfort, slight interference with nasal respiration, etc., the patient does not always make an uneventful and uninterrupted progress to recovery, but that unfortunately some of these trivial operations have very serious consequences. For example, Miss H. T., aged 25, on whom I had operated for tonsils and adenoids, began to complain of headache and of pains in the feet on the second day, then followed pain and swelling in the ankles, knees, wrists, elbows, and so on, and pericardial effusion. The patient was in bed for two months, and more or less an invalid for long after her return to her home in the country.

Again, Miss A., aged about 30, had suffered from nasal obstruction as long as she could remember. I removed the anterior and posterior ends of both inferior turbinates, and guillotined the tonsils. For a few days things went perfectly smoothly, then pain was complained of in the back, temperature rose, and soon an abscess in the left lung developed. And again, a child on whom I had operated for adenoids was, in spite of my orders, allowed out on the third day after operation, got a chill, and developed a most alarming and painful illness, temperature reaching 107° F. on one occasion.

I have cited these three cases because they illustrate the gravity of the conditions that may follow comparatively trivial nasal and naso-pharyngeal operations, and also because they illustrate the fact that the error may be made before, during, or after the operation.

Thus, in the first case one may say that the error was made before the operation, and consisted in not obtaining accurate enough information as to the patient's constitution, history, and state at the time. Had I known that what was afterwards told me by the patient and her doctor, I should either have refused operation altogether