On prevesical hernia : with the relation of a case in which subacute strangulation occurred / by G.H. Makins.

13.

PROCEEDINGS

OF

THE ROYAL

MEDICAL AND CHIRURGICAL SOCIETY

OF LONDON.

Tuesday, April 11th, 1899.

Thomas Bryant, F.R.C.S., President, in the Chair.

Thomas Barlow, M.D.,
Alfred Pearce Gould, M.S., } Hon. Secs.

Present—18 Fellows, 1 visitor.

The minutes of the last meeting were read and signed.

A Ballot was held for the election of Candidates for the Fellowship; and the Scrutineers reported that the following gentlemen had been duly elected:

Gilbert John King Martyn, M.D.Cantab., D.P.H.Eng., Conj. Board.
George Edward Shuttleworth, M.R.C.S.Eng., L.S.A.Lond., M.D.Heidelberg.
Frederick Rufenacht Walters, M.D.Lond., M.R.C.P.Lond.
Alfred P. Hillier, M.D., C.M.Edin.
Louis Bathe Rawling, M.B., B.C.Cantab., L.R.C.P.Lond., M.R.C.S.Eng.
John Edward Sandiland, M.B.Cantab.
Herbert Mundy, L.R.C.P.Lond., M.R.C.S.Eng.
Arthur J. Whiting, M.D.Edin., M.R.C.P.Lond.
W. H. Crosse, M.R.C.S.Eng., L.F.P. & S.Glas., L.S.A.Lond.

The following gifts were announced, and votes of thanks were awarded to the donors:

On villous growths and the common affections of the rectum by Thomas Bryant, M.Ch. (Hon.), F.R.C.S.Eng. (1899): presented by the author. A treatise on human anatomy, by various authors; edited by Henry Morris, M.B.; 2nd edit. (1898): presented by Mr. Henry Morris. On the action of some essential oils and other volatile substances on the growth of the bacillus tuberculosis, and in the treatment of phthisis; by William Murrell, M.D. (repr. from 'Brit. Med. Journ.,' Jan. 28th, 1899); Clinical lecture on dyspepsia of gastric dilatation, by William Murrell, M.D. (repr. from 'Med. Press and Circular,' Jan. 25th, 1899): presented by the author.

The following paper was read:

On Prevesical Hernia, with the Relation of a Case in which Subacute Strangulation occurred: by G. H. Makins, F.R.C.S.

(*Abstract.*)

The paper is founded on the following case.

H. H—, aged 40, tailor, a healthy man, subsequently to getting wet through, was attacked with violent pain in the right iliac fossa, attended with retching and some rise of temperature. He was found to have a reducible right inguinal hernia, which was replaced without any definite influence on the symptoms. The latter, however, subsided under treatment by rest in bed, poulticing, and light diet. On resuming his ordinary mode of life, three weeks later, the man was attacked in a similar manner. The symptoms were again relieved by the same treatment, but tenderness persisted in the right iliac region. He was admitted into St. Thomas's Hospital, under Dr. Hawkins, and examined under an anæsthetic, when a hard nodular tumour was discovered in the right iliac fossa, extending across the hypogastric region into the left iliac fossa.

An abdominal exploration, performed eight weeks after the first attack, revealed a subperitoneal tumour, to the upper surface of which small intestine was adherent as the result of previous peritonitis. The urinary bladder was found to be displaced backwards and to the left.

The tumour was stripped out of the pelvis, a small area of peritoneum being removed with it, a continuous stalk of great omentum needing division for its complete liberation.

After removal the tumour proved to be a large reniform hernial diverticulum containing adherent omentum. The sac had been removed entire, with its neck.

Removal of the sac, together with its neck, in no way influenced the descent of the coexisting right inguinal hernia.

The patient made a rapid recovery without the occurrence of any untoward incident.

The author quotes a similar case recorded by Parise, which he considers identical in nature with his own. Four cases of properitoneal hernia in which the internal sac projected into the vesical region are also quoted.

An attempt is made to distinguish between the two "true prevesical" cases and the properitoneal, the former being regarded as herniæ into special peritoneal diverticula independent of pre-existing or subsequent inguinal herniæ, while in the latter the sac forms an integral part of the inguinal hernia.

The author considers his own case to be an instance of a hernial pouch forming in the position of a direct inguinal hernia, that is in the middle inguinal fossa between the epigastric and obliterated hypogastric arteries, such pouch opposed in its further development by the resistance of the conjoined tendon, being diverted and taking an internal course in front of the bladder in the subperitoneal space, and, further, that the prevesical sac was in all respects independent of the coexisting acquired right inguinal hernia.

Mr. J. Hutchinson, Jun.—I must congratulate the author upon the result in this very exceptional and interesting case. It so happened that, when I saw the printed abstract of his case, I was myself engaged in looking up the literature of prevesical herniæ in connection with a case of my own. In several other cases of which I found record besides those which Mr. Makins

has quoted, points come out which support what he has contended. There are several distinct forms of hernia, at any rate as regards their origin, to which the term pre- or perivesical may appropriately be used. In the first place, there are numerous cases of reduction *en masse*, one of which I had an opportunity of dissecting. In that case the sac lay against the bladder, and contained still strangulated gut. Secondly, there are cases of preperitoneal hernia where there is really a double sac, one part being in the inguinal canal and another down against the bladder or in its vicinity. I would urge that the term pre- or perivesical is preferable to that of inguino-properitoneal, which Krönlein suggested, and which German writers have so generally adopted. It implies that the hernia is always originally an inguinal one, whereas it has sometimes been of the femoral variety, and further it says nothing as to the relation of the internal parts of the sac to the bladder. My case was that of a man healthy, except that he had a right inguinal hernia. This had given him little trouble, and for seven weeks had not come down into the scrotum. I lay stress upon this fact to show that no direct pressure by a truss or vigorous taxis had anything to do with the symptoms for which he came under my care. Without any obvious cause he was seized with pain in the lower part of the abdomen, followed by sickness; the latter soon ceased but the pain persisted, and he was admitted to the London Hospital. I found on passing my finger up the right inguinal canal that there was distinct fulness or tension to the inner side thereof. This fulness and the man's anxious expression, together with the pain, were really the only symptoms upon which to form a diagnosis. I urged the man, however, to allow me to perform abdominal section, and this was done within twenty-four hours of the onset of symptoms. Through a median incision I at once made out the existence of a ring immediately to the right of the bladder leading down into a pouch, in which a single loop of small intestine was tightly strangulated. It was easy to notch this ring and draw out the hernia from above. I may note that the canal was quite clear and the vermiform appendix lay just at the orifice of the neck of the sac. Having reduced the intestine, I sewed up the neck of this pouch with catgut to prevent re-descent of the hernia. I did not feel justified in dissecting out the peritoneal pouch, though this might have been possible. He recovered without a bad symptom. I believe this case is an instance of what the author would term true prevesical hernia, inasmuch as there was no pouch leading into the inguinal canal at the same time as the existing prevesical sac. It is certainly of very rare occurrence, for on hunting up the records at the London Hospital for the last fifteen years I could find no other similar case. I would venture to dissent a

little from the author's conclusion that true prevesical herniæ are similar in nature to the so-called retro-peritoneal variety forming distinct pouches independently of inguinal ruptures. It is very difficult to understand how a pouch can form beside the bladder independently of any existing hernia. There is nothing in the anatomy of the bladder to explain the existence of such a pouch. With the exception of M. Parise's case—the first quoted by Mr. Makins—there is, I think, hardly a single one in which an external hernia had not co-existed or pre-existed, and in this solitary case we have only the evidence of the post mortem. It seems probable that, quite apart from reduction *en masse*, a hernial sac may be occasionally drawn within the abdomen, and thus lead to the development of a prevesical pouch. We all know that once a small pouch has formed, and omentum or intestine become engaged in it, there is no limit to the size it may ultimately attain. We know also that the side of the bladder is not infrequently engaged in hernial sacs, and that there is some danger in operations for the radical cure of inguinal hernia, when applying torsion to the sac, of twisting up a small piece of the bladder. I have several times come across the bladder on the inner side of the hernial sac, and fatal cases from torsion thereof have been recorded. Then we know that the peritoneum forming a hernial sac may be readily displaced, and may go back with its contents into the abdomen, a striking example of which occurred in a case of lumbar hernia which I had the good fortune to obtain. The sac during life had contained the descending colon, which could be reduced with a characteristic gurgling, yet on dissecting it the wall of the sac was a large lipoma, in the centre of which a pouch of peritoneum could be made to protrude, but as readily slipped back. Therefore, when there has been a distinct hernia during life, if on dissecting the inguinal canal we find no sac at all, this does not prove that none existed. In my case it seems probable that the bladder, when distended, may have been close to the internal ring, and in contracting have drawn back the little pouch. This, however, is merely a suggestion. As the author observes, the origin of the sac is an interesting point, but not one of much practical importance. I think the most important lesson to be drawn from his paper, from the cases which he has quoted, and from the many others which can be collected, is that whenever there are symptoms of intestinal obstruction, with a suspicious history of previous hernia, the surgeon should not delay to perform laparotomy, and should not be content with exploring the inguinal canal, even supposing that canal to be partially occupied. Anyone reading four out of five of the cases quoted by the author must feel that the surgery employed was, to say the least, open to criticism, and that the lives of any one of

these patients might have been saved by early laparotomy. If we regard the cases of reduction *en masse* returned through the neck of the sac, Mr. Birkett's evidence is most striking; he gives thirteen cases where the inguinal canal was opened up, and elaborate efforts made to discover the seat of strangulation with success, but he quotes sixteen in which the same procedure was attended by failure, and the patients died with unrelieved strangulation, which could have been got at at once through a median incision. You, Mr. President, have recorded an interesting case of exploration through the inguinal canal in which the neck of the sac was reached and divided by this route, but you have drawn attention to the great difficulty of the operation, and at the same time related another case in which the seat of strangulation could not be thus reached. Many records of cases could be collected in which this fact comes out, that exploration through the inguinal canal alone may fail to get at the site of obstruction. I, personally, have had three cases in which I followed the course advocated, in which there was a history of previous hernia with symptoms of intestinal obstruction, and all recovered. The first has just been narrated. In the second I found a small strangulated loop of intestine at the internal ring, and I could draw it out easily. In the third the loop of intestine was strangulated by a perfectly free ring from an old hernial sac. I hope that one result of this discussion will be to emphasize the necessity of exploring through the median line in all cases where there are symptoms of internal obstruction, with history of recent hernia, even though the inguinal canal may be partially occupied.

Mr. Macready.—The study of these cases is rendered very difficult by their extreme rarity, and it is a very fortunate circumstance that this case has fallen into the hands of one who could deal with it so successfully and whose acquaintance with the remote parts of surgery has enabled him to identify and to describe it so clearly. In considering the origin of these cases Mr. Makins concludes that prevesical herniæ are formed in distinct peritoneal pouches, independent of inguinal ruptures both past and future, but in a previous passage he suggests that this hernia was developed from a direct inguinal sac whose course was interrupted and diverted. To the last supposition that the hernia was developed from a direct inguinal sac there is this objection, that a direct hernia can hardly be said to possess a sac until it has traversed the abdominal wall, and if it has traversed the abdominal wall it is difficult to understand how it can be interrupted and diverted. This objection appears to be almost insuperable unless, indeed, a further supposition is indulged in; unless it is supposed that the direct sac was formed in the usual way and followed the usual course beyond the conjoined tendon; that from the abdominal part of this

hernia an intra-parietal sac was developed; and that as the intra-parietal portion enlarged it drew up after it the external part of the sac into the abdomen again. This effect of the growth of an intra-parietal sac at the expense of the external portion was pointed out long ago by Mr. John Couper. But in lieu of this supposition Mr. Makins's conclusion is to be preferred where he attributes the origin of prevesical herniæ to distinct peritoneal pouches. Mr. Makins no doubt refers to those peritoneal pockets or crypts which are found occasionally in the subperitoneal tissue of the hypogastric and inguinal regions. They were regarded by Rokitansky as due to an original anomaly in the development of the peritoneum, and he appears to have been aware that they sometimes contained portions of the floating viscera. If the mouth of one of these crypts is large enough to admit a small piece of omentum, there is no limit to the further increase of the sac, as Mr. Hutchinson has remarked. The supposition that the hernia under discussion began in a peritoneal pouch is more simple and more credible than that it was derived from an interrupted and diverted direct inguinal sac.

Mr. McAdam Eccles.—The author has alluded to the question of reduction *en masse*, and I think what Mr. Macready has said as to this is probably right. If a man had a direct inguinal epilocele which becomes simply irreducible, not strangulated, and violent taxis is applied with return of the sac and its contents through an opening in the conjoined tendon into the abdomen there is still, to my mind, a diverticulum from the peritoneum which may afterwards, instead of being extruded through the conjoined tendon once again, be deflected into the prevesical space. I do not think, however, that this is what took place in this particular case. The patient undoubtedly had another inguinal sac, and, as far as the observation of others and my own have gone, it is very rare to have two inguinal sacs on the same side; in fact, it would seem that one inguinal sac is likely to render the rest of the peritoneum of that part somewhat tense and not liable to protrusion. Again, from what we have heard of the history of the case, no violent taxis seems to have been applied to the hernia, as it was not strangulated nor apparently even irreducible. We are therefore rather led to consider that there is only one other way in which this form of sac might be produced, viz. in a manner similar to the formation of a "*hernie en bissac.*" The author brings forward one theory or suggestion that this was not so, because it contained omentum alone. I happen to have had a case last year very similar to Mr. Hutchinson's, except that it was on the left side, and the man had symptoms, not of intestinal obstruction, but the symptoms which follow with nipped omentum—bdominal pain, distension, etc. He had a portion of irreducible

omentum in his scrotal sac. I determined to explore that first of all, and I found the omentum lying in that portion of the sac perfectly healthy. Finding that this was not the seat of the trouble, I prolonged the incision upwards, and practically did a laparotomy in the inguinal region. I then found another portion of sac lying behind the os pubis but rather more towards the middle line than is the case with intra-peritoneal pouches, and in this was a portion of omentum very much congested, but no intestine. Here, then, was a case with only omentum in the pouch which was practically a second sac. Whatever may be the actual cause of these eccentric sacs, the important fact to remember is that if there are any signs of strangulation they must be very freely explored, and where this cannot be done from the inguinal region a median incision is to be preferred.

The PRESIDENT: I place a high value on Mr. Makins' paper, and consider Mr. Hutchinson's case should be placed upon record with the author's. From the discussion which has taken place, it does not appear that we are quite clear in our minds as to the varieties of hernia that may occur in this region or in the region of the bladder. The author's case certainly appears to be one of a hernia, with its contents in a peritoneal sac, which was placed on the subperitoneal tissue of the cavum Retzii, although there is a difficulty in explaining how such a large sac of peritoneum could have been formed in that position; and we must not forget that hernia with a peritoneal sac is not the commonest form of what I prefer to call a "displaced hernia." The commonest kind is where, with a congenital variety of inguinal hernia, a rupture has taken place at the neck of the sac, and through the rent either omentum or intestine has passed either in front of the bladder, downwards into the pelvis, externally towards the iliac fossa, or sometimes into the parietes, whilst some examples clearly belong to the "bissac group." It has been my fortune to have had two examples of rupture into the prevesical space, and both of these happily recovered after operation. In one, a lunatic at Hoxton House, the man, aged thirty, had a rupture on the right side, apparently of the congenital variety, for the hernia when it occurred, at once descended into the scrotum. The hernia at times was a source of trouble, but, as a rule, it was readily reduced; on one occasion, after reduction, acute symptoms of strangulation appeared, for which I saw him on the second or third day. Nothing whatever was found at that time in the hernial sac, although on careful palpation there was a distinct, hard, tense tumour to be made out in front of the bladder, and travelling across the middle line of the abdomen almost as far as the left inguinal region and extending upwards half way towards the umbilicus, I adopted the old rule of exploring the tumour in the

region of the hernia, when I found a rupture of the neck of the congenital sac, through which many inches of small intestine had passed inwards towards the bladder. These I readily drew out of their position and returned them through the neck of the congenital peritoneal sac into the abdominal cavity, the bowels being black with congestion but at the same time glistening. This man got well in a most marvellous way, as lunatics often do. The second case was of the same kind, but not in such an exaggerated form. It was that of a young man with a hernia running down the inguinal canal and through the external ring, which was quite reducible, but at once reappeared on removing pressure. There were also present the symptoms of strangulation. In this case, moreover, there was extending from the internal ring a tense swelling, situated in front of the bladder, and nearly as far as the median line of the body. I dealt with this case in the same way as I have described in the former case, and brought out a quantity of intestine as well as omentum, which I returned into the abdominal cavity, and the patient did very well. Now these two cases were examples not of the "bissac" form of hernia but of rupture at the neck of the sac, and I believe that a number of cases of so-called "bissac hernia" are really instances of this variety of rupture. Mr. Hutchinson's case is a very valuable contribution to the paper of the evening, and it appears to be of the same kind of hernia as that which the author has described. I was pleased also to hear Mr. Hutchinson speak of Mr. Birkett's paper which originally came out in the 'Transactions' of this Society; he was really the first to explain accurately this variety of the so-called reduction *en masse*, and it was from his investigations that I learned what I have stated, viz. that the majority of these cases are due to ruptured sac.

Mr. Makins.—I think the appearance of the neck of the sac in my case is very much against the idea of its being a diverticulum from a ruptured sac, but as far as position is concerned this was almost identical with what existed in the first case which our President has referred to. With regard to the properitoneal sacs, I think it is clear that they may develop to a large size quite independently of any injury to the hernia. That, I think, is evidenced by some of the femoral cases and the rare cases of obturator hernia with double sacs. The occurrence of these does support the mechanical theory to a certain extent, for with regard to the obturator hernia especially it is easier for the sac to pouch within the pelvis than outside where considerable resistance may be offered. I thank Mr. Hutchinson for bringing his case, which, as far as I can judge, seems to be similar in nature to my own, except that his contained intestine and mine omentum. It seems to me that Parise's case is the only published one exactly on all fours with mine. With

regard to Rokitansky's pouches, the description is so brief that one can hardly be certain of what he is describing. It is a common thing, however, if you open the belly by a transverse incision in the dissecting-room to find the inguinal pouches strongly marked, there being digital fossæ. They are, indeed, rather deep holes, and we know that the acquired inguinal hernia does commence in hollows of this kind. If a hollow exists there I do not see what difference there is between the development of a pouch at the bottom of such a depression and a great enlargement of the duodenal or retro-cæcal pouches, although I cannot explain this development. I suggest only that the prevesical sac started from the same position as a direct hernia, and I quite appreciate Mr. Macready's criticism of my nomenclature. I should have said "a pouch starting in the same position as a direct hernia," and not have spoken of the sac as a "direct inguinal" one. With regard to reduction *en masse*, considering the time between the exertion of actual violence to the hernia by the patient and the time the prevesical sac was found, I take it that reduction *en masse* could not have been produced. With regard to the sac containing omentum alone I did not allege this as a proof that it was not a properitoneal hernia. I entirely endorse what Mr. Hutchinson has said as to the treatment of these cases.