On the lower left eyelid there is a hard warty growth, the size of a pea, chalazion-like, but wants the characteristics of the latter. The boy who died had a similar growth, the mother now tells me.

ON LUMBAR HERNIA.

By J. HUTCHINSON, JUN., F.R.C.S.

It will be admitted that any contribution to our knowledge of this comparatively rare form of hernia is worthy of record, since there are several points about it which are still doubtful. It is generally assumed that the small triangular space bounded by the external oblique and latissimus dorsi muscles, and the crest of the ilium (Petit's triangle), constitutes a relatively weak spot in the abdominal wall, that hernial protrusion may here occur, but that strangulation of the contained intestine is very unlikely to develop. Indeed, almost the only record of an operation for strangulated hernia in this region which we possess dates from as far back as 1738 (Ravaton's case), since in Mr. Edmund Owen's case¹ the rupture was neither strangulated nor obstructed. To Mr. Owen, so far as I can ascertain, belongs the credit of having performed the first operation for radical cure of a lumbar hernia. There is singularly little evidence as to the anatomy of this form, and what there is hardly confirms the current view that the presence of Petit's triangle accounts for the development of the hernial protrusion. No specimen had hitherto been shown at the Pathological Society; and I believe the one which I was able to exhibit there a few weeks ago, through the kindness of Dr. Stephen Mackenzie, is the only dissection of a lumbar hernia in existence in London. It was obtained from an elderly and rather emaciated man, who died (from other causes) in the London Hospital; the hernia was about the size of one's fist, was situated in the left lumbar region lying over Petit's triangle, and extending nearly from the last rib to the iliac crest, and it had existed for some years. It could be made to markedly diminish on pressure, was resonant to percussion, and had an impulse when the patient coughed. Gurgling could be detected when reduction was made, the swelling returning when the pressure was taken off. It caused the patient no pain, and hardly any inconvenience. I was naturally inclined to think that the hernia protruded through the orthodox triangle, but found, on dissection, that this was not the case, as the aperture, which would admit two fingers and was circular in shape, was really situated above and to the inner side of the triangle. The protrusion was, in fact, just outside the quadratus lumborum, through the transversalis aponeurosis and the latissimus dorsi, where the latter arises from the strong fascia covering the erector spinæ. Another interesting feature at the *post-mortem* examina-

a, latissimus dorsi muscle; b, external oblique; c, Petit's triangle. The dotted circle in the hernia indicates the relative size of the aperture and its position with regard to Petit's triangle.

tion was the absence of any peritoneal sac. The looseness of the attachments of the peritoneum in this region is well known, and

is taken advantage of in certain operations, such as removing the kidney through a lateral incision. It was quite easy to make the peritoneum, by gentle pressure, protrude into the centre of the hernial tumour, and, as it was certain that it had habitually during life contained intestine, it is obvious that every time the latter was reduced the peritoneal sac must have returned with it into the abdominal cavity. Whether this feature has been present in other cases of lumbar hernia it is impossible to decide, but it is one rarely met with in connection with the more common varieties of rupture.

What part of the intestine was present during life in the hernia I was unable to decide; the descending colon lay just to the inner side of the aperture, but it is quite probable that some coils of small intestine really protruded. The fact that this can occur is proved by Ravaton's case (No. 3 in the appended list), and that omentum may form part of the contents was also demonstrated in Baron Larrey's case (No. 17). But it is no doubt true, as suggested by several writers on the subject, that the colon (ascending when the hernia is on the right side, descending when on the left) is the most usual part of the abdominal contents to protrude in this region.

With regard to the coverings of a lumbar hernia it might be expected that the outer part of the sac would contain some part of the internal oblique and the transversalis aponeurosis, for the muscular fibres of the latter cease externally to the usual site of the hernia. But such little evidence as we possess on the point does not confirm this view, for in the cases in which an incision has been made there is no mention of any muscular fibres being cut through. In my case the sac was really formed by a local hypertrophy of the subperitoneal fat which had insinuated itself through the aponeurosis and muscles, and had thus come to form a tumour the size of an orange in the subcutaneous tissue. I have demonstrated the mode of development of fatty herniæ in the femoral, inguinal, and umbilical regions by a series of preparations shown at the Pathological Society.² It is certain that this mode of origin of hernia (the protrusion of subperitoneal fat followed by the descent of a peritoneal sac, and sometimes of intestine) is more common than one would be led to suppose from the ordinary textbook accounts, and it was especially interesting to me to find the same thing occurring in the lumbar region. It is probable that the cases reported by Marmisse, Auzias-Turenne, Gosselin, and Marquez (Nos. 11, 15, 18, and 20) were of the same nature. Out of the twenty-nine cases of which I have abbreviated the records, sixteen (over 50 per cent.) developed spontaneously, or were attributed to strain, and all of them were in adults or elderly subjects. Males and females appear to be equally liable to lumbar hernia; seven cases of this class (of apparently spontaneous origin) were on the left side, four on the right.

In six cases (about 20 per cent.) the hernia followed in the track of a previous abscess or sinus, four in males and two in females. An ingenious suggestion has been made that the path which the protrusion takes may be determined by the course of a nerve, especially perhaps the lowest posterior lumbar branch, and this may apply to the original abscess, which leads later on to the hernia.

In five cases the hernia was due to wound or other severe traumatism of the loin, and two were said to be congenital. About the origin of the last form of lumbar hernia we are absolutely in the dark, for there is nothing in the development of the abdominal wall that explains the formation of a gap in the lumbar region.

For practical purposes we may say that the spontaneous form of lumbar hernia is confined to the period of adult life or old age, whilst that due to abscess or traumatism may occur much earlier.

It is quite erroneous to attribute to M. Petit the first account of lumbar hernia. It was mentioned by Barbet so long ago as 1650, and as seen in the list appended, several cases were reported before M. Petit's very imperfect record was published in 1783; nor, as already mentioned, is there strong evidence that in the majority of cases the protrusion occurs through the triangle named after the French surgeon. Mr. Edmund Owen states that in the child on whom he successfully performed a radical cure the protrusion was at this site; but in the two other cases, which one can feel certain on the point (Braun's, No. 27, and my own), the triangle was not the seat of the hernia; in the former case it did not exist. As is well known, the latissimus dorsi and external oblique may be in close apposition at their attachments to the iliac crest; and Lesshaft, by examination of a considerable

¹ Reported in the JOURNAL for May 5th, 1888.

² Transactions for 1886 and 1887.

Table of Cases of Lumbar Hernia.

No.	Sex.	Age.	Side.	Particulars.	Reference.	No.	Sex.	Age.	Side.	Particulars.	Reference.
1	F	30	?	3" from anterior superior spine, apparently through Petit's triangle, 8 cm. in diameter, contained intestine only, easily reducible; appeared during straining effort at age of 30. A similar triangular aperture could be made out on the other side (without hernia).	Hardy, <i>Bull. de l'Acad. de Méd.</i> , vol. 34, p. 124.	18	"	54	"	Size of a small orange, was largely composed of fat, but contained intestine at times in its centre, was accompanied by vague pains radiating from the loin. Considered to protrude through Petit's triangle.	Gosselin, <i>Gaz. Méd. de Paris</i> , 1881, p. 125.
2	"	?	Right	In making a false step the patient felt sudden pain in right loin, then vomiting came on from which patient died. Garengot, after death, found tumour "the size of a nut" which suddenly disappeared with gurgling during taxis.	Garengot, <i>Traité des Opérations</i> , 1731.	19	?	6	"	Was noticed directly after a severe fall in which the head and right side of the trunk were injured, it appeared to contain intestine and was reducible. The child died on the second day from the head injuries, but no post-mortem was made.	Decaïsne, <i>Bull. de la Soc. de Méd. de Gand</i> , Jan. 1839.
3	"	Middle-aged	Left	Pregnant, 3 weeks vomiting since tumour appeared. Ravaton operated, let out some pus, then ligatured some inflamed omentum and returned 3 coils of small intestine. Some days after the operation the intestines came out again with each dressing and patient made a lingering but complete recovery and gave birth to a child.	Ravaton, <i>Traité des Plaies Armées à Feu</i> , 1750.	20	F	Aged	"	Oval, "the size of an egg," was largely fatty but contained intestine which could be reduced, caused at times vomiting and colic. Had been noticed five years before she came under care.	Marquez, <i>Soc. Méd. du Haut Rhin</i> , 1869.
4	M	"	Both	The patient had other hernie. A hernia existed in each lumbar region, but no full particulars are given.	Lachausse, 1759.	21	?	"	?	Similar case to the last, the hernia gave hardly any trouble.	Levy, <i>Gaz. Méd. de Strasbourg</i> , 1869, p. 275.
5	F	"	Left	Pregnant woman. Hernia the size of a child's head, was usually reducible but became strangulated. It was, perhaps, operated on, but, unfortunately, no details are given as to this point.	J. L. Petit, <i>Traité des Maladies Chir.</i> , T. ii, 1783.	22	F	"	?	The hernia became twice incarcerated causing sickness, etc., but it was reduced and a belt applied.	Triponel, <i>ibid.</i>
6	M	65	Right	Hernia appeared suddenly after violent exertion, was subsequently reducible, but symptoms of strangulation developed a few months later. However when the patient lay prone reduction could be effected, and a truss kept the hernia back.	Cloquet, <i>Thèse sur les Hernies</i> , 1819.	23	F	6	Right	The size of a small orange, developed in the site of a previous abscess, hernia probably contained colon. Was cured by a radical operation in which the sac was pushed back unopened and the muscles sutured.	Mr. Edmund Owen, <i>BRIT. MED. JOUR.</i> , May 5, 1888.
7	F	?	Left	The patient after a fall complained of severe lumbar pain and was long treated for "pleurisy." Some 36 years later an abscess developed in the loin and a loop of intestine was exposed. Healing occurred.	Van Hengel, <i>Gaz. des Hôpitaux</i> , 1848.	24	M	4	?	Followed the healing of a spinal abscess. Hernia size of goose's egg, easily reduced.	Campbell, <i>New York Med. Jour.</i> , 1874, p. 184.
8	"	?	"	Hernia of small size and easily reduced.	Colles, <i>Dubl. Journ.</i> , May, 1857.	25	"	Adult	Right	Hernia 5" in diameter, was said to come through Petit's triangle and to contain ascending colon, reducible.	Coze, <i>Revue Méd.</i> , 1874, T. i, p. 407.
9	M	Middle-aged	"	Developed after a severe blow on the loin, was the size of a fist, easily reducible, and was cured by the continued use of a belt truss. At first it gave rise to many errors of diagnosis.	Nélaton, verbal communication to Baron Larrey.	26	"	"	"	Was mistaken for an abscess and incised, much smaller than in the last case, both were in strong artillerymen and were attributed to strain in riding, etc.	Coze, <i>ibid.</i>
10	"	"	Right	Similar case to last, the hernia appeared some little time after the injury.	Chaplain, <i>Bull. de la Soc. de Méd. de Marseille</i> .	27	"	33	Left	Patient had suffered from spinal caries and double lumbar abscess. Hernia followed close to the discharging sinus on left side. After death the aperture was found to be through the latissimus dorsi, Petit's triangle not existing.	Dr. H. Braun, <i>Langenbeck's Archiv</i> , xxiv, p. 213.
11	F	40	Left	Tumour the size of a foetal head at term, apparently was a fatty hernia in origin but contained intestine, the skin was stretched over it.	Marmisse, <i>Gaz. des Hôpitaux</i> , 1862.	28	"	24	Right	Formed in an aperture produced by necrosis of part of iliac crest, easily reduced, said to contain ascending colon.	Langenbeck's <i>Archiv</i> , xxv, p. 908.
12	M	?	"	Supposed to be a lipoma at the time he came under care at the age of 18. It was the size of an apple, swelled out when he coughed and could be reduced. A belt was applied.	Basset, <i>Bull. de la Soc. de Méd. de Toulouse</i> , 1864.	29	"	65	Left	Originally a fatty hernial protrusion to inner side of Petit's triangle. Contained intestine which was easily reduced.	Author, specimen in London Hospital museum.
13	"	67	"	Said to have originated in a blow on the loin with a fist, it gave but little trouble and was only partly reducible. A belt with metal pad was applied.	Grynfeldt, <i>Montpellier Méd.</i> , T. xvi.						
14	"	46	"	Followed the healing of a lumbar abscess which originated in a severe contusion of the part, could be wholly reduced and kept in place by a belt.	Sistach, <i>Recueil des Mémoires de Méd. Militaire</i> , 3e Série, T. xix.						
15	"	Elderly	"	Of three years' duration, small, was probably a fatty hernia though suspected to be omental, easily reduced.	Auzias-Turenne, communication to Baron Larrey.						
16	F	?	?	Was supposed to be an abscess and incised, a fecal fistula being thus formed. Fortunately this ultimately healed.	Professor Dolbeau.						
17	M	28	Left	Was shot in the abdomen, the ball lodging in the left loin, an abscess formed, and after its cicatrization a hernia developed close to the scar. It was at first mistaken for an inflammatory swelling, could be mostly reduced, but some omentum remained. After death this was confirmed by dissection, the opening was oval and just below the last rib.	Larrey, <i>Bull. de l'Acad. de Méd.</i> , 1869, p. 160.						

NOTE.—The ages given refer to the time at which the hernia was first noticed in each case.

number of bodies, determined the fact that Petit's triangle was nearly always wanting in young children, and in about every fourth adult man. In grown-up women, however, it is practically constant. To those interested in the literature of lumbar hernia, Baron Larrey's and Dr. Braun's papers may be commended as giving the most complete account of the subject.

It only remains to say a few words as to diagnosis and treatment. With regard to the former, the mistake which has occurred most often has been to suppose that the hernia was a chronic abscess, and in Dolbeau's case (No. 16) the intestine was actually incised and a fecal fistula formed, which, however, ultimately healed. The absence of true fluctuation, the probable resonance, and the reducibility of the swelling, should serve to prevent such an unfortunate mistake. Other erroneous diagnoses that have been made are hernia of muscle, sarcoma, and hæmatoma; but it is unnecessary to do more than mention these. With regard to lumbar hernia, as is the case with most rare diseases, the knowledge of its possible occurrence is the first and the chief step towards a correct diagnosis. That in more than one case the swelling has been at first called a lipoma is not surprising, since it is probable that the hernia, in a fair proportion of cases, has actually consisted in a protrusion of the subperitoneal fat. At any rate, this view is supported by the example now brought forward.

With regard to treatment, the use of a well-made abdominal belt nearly always suffices, but one may safely conjecture that Mr. Owen's case will be followed by others in which a radical cure is effected by operation. It is a curious fact that Ravaton's case,

reported more than one hundred years ago, remains the only one in which there is a clear history of operation for strangulation, though one or two others have been recorded in which this complication has occurred.

CASE OF STRANGULATED LUMBAR HERNIA.

By G. H. HUME, M.D.,

Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

THE following instance of this rare form of hernia occurred in the practice of Drs. Skrimshire and Brumell, of Morpeth, with whom the case was seen on April 24th. The patient was a gentleman, 68 years of age, who had always been constipated, and suffered from frequent attacks of spasms. Latterly he had shown marked evidence of cardiac failure in an extreme blueness and coldness of hands and feet, and in dyspnoea on exertion. For fifteen years there had been a lump in his left side, usually about the size of a fist, but frequently becoming larger; it never altogether disappeared. On more than one occasion it had become enlarged and painful, with symptoms of obstruction.

When seen, the tumour was as large as a child's head. It occupied the left lumbar region between the crest of the ilium and the last rib. Symptoms of strangulation had been present for two days, and operation was urged, but consent for this was not obtained till the following morning.

A slanting incision was made from the crest towards the ribs. After the skin and subcutaneous tissues, a thin muscular layer—the anterior portion of the latissimus dorsi—was cut through. Immediately underneath was the sac. This when laid open was found to contain anteriorly a coil of small intestine, inflamed and granular; next another coil of small intestine, quite gangrenous; and most posteriorly the sigmoid flexure which had become twisted on itself. The sac communicated with the general peritoneal cavity by a slit-like aperture, and across the neck were stretched two tense cords, which were the agents in producing strangulation. When these cords were divided it was easy, after separating some adhesions, to return the sigmoid flexure and the most anterior portion of the small intestine into the peritoneal cavity. The gangrenous coil was resected to the extent of thirteen inches, the cut ends of the bowel being reunited by Lembert's stitches of fine silk; and this portion of the intestine also was replaced. The sac was then stripped out of its bed, and cut away at the neck. The margins of the peritoneal opening were united by a continuous suture of strong catgut.

The patient rallied fairly well, but sank somewhat suddenly twenty-four hours after the operation.

So far as the disposition of parts could be ascertained during the operation, it seemed to be as follows: The hernial protrusion had taken place in front of the quadratus lumborum, and had expanded but not pushed through the anterior portion of the latissimus dorsi. When the sac was separated from its bed it seemed to have lain between this muscular layer and the aponeurosis of the transversalis. The rupture did not appear to have protruded through the triangle of Petit, as is stated to be the rule in cases of lumbar hernia. Unfortunately, the opportunity was not allowed of ascertaining by *post-mortem* dissection the exact relation of parts.

THE Lords Committee on the Water of Leith Purification Bill, which consists of the Duke of Westminster, the Earl of Arran, Lord Colchester, Lord Sherborne, and Lord Sandhurst, were considerably startled by the production in the committee-room of enormous tampers filled with rather strongly-smelling samples taken from the bed of the river Leith, and produced with the view of showing how dangerous such material was to the public health. The members of the Committee quickly arrived at the conclusion that they were likely to be equally dangerous to their own individual health.

SPLENECTOMY IN SPAIN.—Splenectomy was recently performed for the first time in Spain by Dr. Mas, of Valencia. The patient was a woman, the mother of several children, who had a hydatid tumour of the spleen as large as a foetal head. The organ was completely removed, and the patient made an excellent recovery.

BEQUEST.—The late Mr. George Dawes, of The Hall, Smethwick, who died on August 18th, 1888, has bequeathed £1,000 to the Queen's Hospital, Birmingham.

EXPERIMENTS ON LIGATURE OF THE INNOMINATE BY A MEDIAN INCISION WITH REGARD TO THE FAILURE HITHERTO OF THE LIGATION IN CONTINUITY FOR ANEURYSM OF THE SECOND OR THIRD PART OF THE RIGHT SUBCLAVIAN.

By WALTER G. SPENCER, M.S.

(From the Laboratory of the Brown Institution.)

ANEURYSMS of the second and third part of the right subclavian artery are a cause of great suffering to the patient, and, except in a few cases in which medical treatment and direct pressure have been successful, they have terminated fatally.

Their occurrence is not infrequent. We find in the published *Surgical Reports of St. Bartholomew's Hospital* that in the ten years, 1877-86 inclusive, there were in the hospital 8 cases of subclavian aneurysm as compared with 35 cases of popliteal aneurysm, the average number of in-patients being about 6,250. Of the 8 cases, seven died in the hospital; the eighth was unrelieved. One case, an aneurysm of the third part, was injected with perchloride of iron (2 drachms) on three days in succession. A consecutive aneurysm formed and burst on the twelfth day after the first injection. Two of the cases were treated by amputation at the shoulder-joint. Mr. Holden removed the arm for an aneurysm of the second or third part of the subclavian, which was threatening to burst. The sac of the aneurysm became inflamed, and blood leaked from it into the tissues around. Death took place on the thirty-seventh day from pleurisy and bronchitis. The other case was under Mr. Willett's care whilst I was one of his dressers, and I have his permission to make use of the notes which I made at the time.

A man, aged 30, had noticed the disease, after a strain, about nine months before. Medical treatment was employed for six months, and then Mr. Willett tried to ligature the third part of the subclavian, it being hoped that the aneurysm was more axillary than subclavian. When the deep fascia was divided, a pulsating swelling bulged and filled the whole of the subclavian triangle, and, although some of the fibres of the scalenus anticus were also divided, it was found to be impossible to get to the proximal side of the aneurysm. The arm was then amputated at the shoulder. The wound healed; but the aneurysm increased slowly until the patient's death fifteen months after the operation. He suffered pain during all this period, and at times the pain was apparently agony. It was combated in part only by morphine, of which he took 2 to 3 grains daily before the end. The aneurysm had filled the whole round of the shoulder, from the scapula forwards; the clavicle had been fractured and eroded so that only the two ends remained, and the same may be said of the upper two ribs; the third rib was eroded to a less extent. The aneurysm had involved the upper part of the chest, pushing before it the thickened pleura. The innominate and the first part of the subclavian artery as far as the thyroid axis were quite healthy; at this point the aneurysm commenced.

The innominate is, as a rule, healthy in patients who have died from these aneurysms; but Mr. Holden's case was an exception, for the innominate was found to be atheromatous and dilated to the size of the aorta. Subclavian aneurysm is about three and a half times more common on the right side than on the left, and on the right side about six times more frequent on the third part than on the first.

The ligature of the innominate has been employed because other means have failed to rid the patient of a painful disease and the certainty of a fatal termination. The operation has appeared to the surgeons who have undertaken it to be Hunterian in its characters, and the success of the Hunterian ligature to other arteries has led to its application to the innominate. I shall show in tabular form how nearly the operation has been a success, and that it holds out a considerable promise of cure when the result on the aneurysm is noted in those cases in which the artery has been tied.

¹ Poland, "Report on Subclavian Aneurysm." *Guy's Hosp. Rep.*, vols. xv, xvi, xvii. Barwell, *Ashhurst's Internat. Encyclop. of Surg.*, 1883, vol. iii, p. 506, art. "Aneurysm."