ACUTE PSOAS ABSCESS

BY

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The great majority of psoas abscesses are chronic in nature, and usually secondary to a tuberculous focus in the vertebral column or pelvic bones. A certain number, however, are more acute. The fact that the correct diagnosis is seldom made in these cases seems to be due mainly to the possible existence of the condition not being realized; for the clinical signs are constant and characteristic. Although the older textbooks, such as Erichsen's *Surgery*, contain a fairly comprehensive list of the possible sites of origin of psoas abscesses other than the spine, and the signs which may be of help in their differential diagnosis, most of the modern textbooks give the impression that the condition is practically always associated with spinal disease. Some of them do not even mention any other cause, while others briefly refer to the possibility of the abscess being secondary to lesions such as suppurative appendicitis, perinephritis, or sacro-iliac disease. The references in the literature are scanty, but there are indications that this is due more to the condition being overlooked than to its rarity.

Baer, Bennett, and Nachlas¹ discuss forty-two non-tuberculous psoas abscesses seen at an orthopaedic department. Of these, twenty-four were seen in four years. They state that the cases were incorrectly diagnosed by good clinicians and sent to an orthopaedic surgeon, because it is generally believed that such abscesses must be due to disease of the spinal column or the skeletal portion of the pelvis. A summary of the possible primary lesions is given, and special attention is drawn to those abscesses following suppuration in the retroperitoneal lymph nodes, but there is no indication of the number which were thought to have arisen in this way. Behrman² describes four cases seen at a children's hospital during one year. Of these, two were operated on for acute appendicitis; one was diagnosed as acute arthritis of the hip and the other as Pott's disease. He suggests that the abscesses might be secondary to lower pole perinephric suppuration, since the arrangement inferiorly of Gerota's fascia readily permits spread of an infective process downwards. He quotes Israel³ and Wolkow and Delitzen⁴ in support of this view, admitting, however, that the only positive evidence was the presence of a raised cellular count in the urine of three of his cases. One case of staphylococcal psoas abscess is reported by Rocher and Malaplate.⁵ A thorough examination of this patient disclosed no primary infective focus, and although there is no mention of a blood culture having been done, these writers appear satisfied that the condition arose in the course of a staphylococcal septicaemia. They mention that before operation it was undecided whether the abscess was primary or due to spread from a perinephric focus, but no evidence of the latter was found during the exploration. Damm⁶ also described a case of acute psoas abscess in which the origin could not be traced from the vertebral column or sacro-iliac joint. The author did not consider that it was of a tuberculous nature, but the actual bacteriological cause does not seem to have been established.

CASE RECORDS

The following three cases were seen by myself during the course of one year, and in each case the abscess appeared to be definitely pyaemic in type.

CASE I

F. Q., female, aged 1 year 3 months. Admitted to hospital on February 4th, 1932. The child was very ill. A superficial abscess was found over the upper part of the back. This was drained, and a haemolytic streptococcus was cultured from the pus. On February 12th the left hip was found to be in fixed flexion of about 75 degrees; other movements were normal. A radiogram of the spine, pelvis, and hip showed no bony abnormality. A left psoas abscess was opened and drained through an inguinal incision on

February 15th. Haemolytic streptococci were cultured from the pus. A few days later a superficial abscess developed over the left pectoral muscle, and a similar organism was recovered from the pus. The abscesses cleared up satisfactorily after drainage, but the child continued very ill with a typical septicaemic temperature, which only gradually subsided after about four weeks. The hip remained flexed, and a radiogram taken on March 17th showed a separation of the upper epiphysis of the left femur. There were no signs of an acute infection of the joint. The limb was put up in a plaster-of-Paris splint, and a satisfactory position was obtained. The patient then developed measles, but made a good recovery.

CASE II

S. C., female, aged 11 years. Admitted February 11th, 1932. Febrile attack five weeks before, followed by stiffness and pain in the right hip. State on admission: temperature 101.4°, pulse 108, pale and ill. Right hip held flexed nearly to a right angle; other movements at the hip were normal. Blood count: 20,000 white blood cells, 80 per cent. polymorphs. Urine contained a trace of albumin; there were no other abnormal constituents. A radiogram of the spine, pelvis, and hip-joint showed no bony change. On February 18th a right psoas abscess was drained through an inguinal incision. *S. aureus* was cultured from the pus. Discharged on March 3rd. General condition very good. Hip straight.

CASE III

B. B., male, aged 62 years. Admitted February 12th, 1933. No previous illness of importance. Indefinite onset of pain in the right groin two weeks before, which had become steadily worse. For the last few days the patient had been unable to straighten his right hip. A swelling had been noticed in the right groin for three to four days. State on admission: general condition fairly good; temperature 99°, pulse 100. Fixed flexion of the right hip to about 40 degrees. Other movements of the hip were normal. A rather hard mass could be felt in the right iliac fossa running down almost to Poupart's ligament. No definite fluctuation was obtained, and the mass was at first thought to be enlarged glands. Nothing abnormal was found in the rectum or on examination of the spinal column. A radiogram of the spine, pelvis, and hip showed no bony abnormality. On February 18th fluctuation was obtained in the swelling in the right side, and a right psoas abscess was opened through an inguinal incision after aspiration with a needle. *B. Pfeiffer* in pure culture was recovered from the pus. Discharged on March 4th with no symptoms. Flexion deformity of the hip quite cleared up.

Note by Dr. J. Menton

"The isolation of *B. influenzae* from the pus of this psoas abscess is interesting, especially in view of the fact that your patient does not give a history of recent influenza. I have encountered instances where the same organism appears to have caused meningitis, and in several of these cases the meningitis seemed to be the outstanding lesion, and no evidence of general infection was forthcoming. I am stressing these points in view of the present controversy on the role of this organism in the cause of disease."

DIAGNOSIS

The correct diagnosis of an acute or subacute psoas abscess should be fairly simple if the possibility of the condition is borne in mind. As a rule the patient has been ill for at least some days before the abscess appears, and complains of pain on the affected side running down into the groin or leg. This pain may be neuralgic in character and due to involvement of the lumbar nerves running in intimate relation to the muscle. The outstanding clinical sign is fixed flexion of the hip, and the degree of flexion is considerably greater than is likely to be found with simple spasm of the psoas from the irritation of a neighbouring inflammatory lesion, such as an acute appendicitis. Occasionally this sign may be present with an acute inflammation of the muscle without abscess formation, as in the case described by Nicolas, Lebeuf, and Charpy.⁷ In addition to the amount of flexion found in these cases, the deformity will usually persist even under full general anaesthesia. The fixed flexion of the

hip, and pain on attempted extension, not infrequently leads to a diagnosis of acute arthritis, but thorough examination of the hip will show freedom of all other movements if the flexion of the joint is respected. Where the condition is not too acute for the patient to walk, a limp is always complained of, and there is considerable apparent deformity in the standing position. This, however, readily disappears when sitting, although a slight scoliosis may persist. There is no tenderness on percussion over the vertebrae, and no spasm of the erector spinae muscles, but occasionally deep tenderness may be elicited in the lumbar triangle.

Examination of the abdomen reveals some muscular rigidity on the corresponding side, and an underlying tumour may be felt. If the upper part of the psoas sheath is involved the thickening and tenderness found on bimanual palpation of the loin are strongly suggestive of a perinephric abscess. The acute abscess tracks outwards into the sheath of the iliacus, and, unlike the chronic one, seldom passes deep to Poupart's ligament into the thigh. A radiogram of the spine and pelvis will be negative, but it is said that there may be haziness of the sacro-iliac or hip-joints if the abscess overlies them, and this may be sufficient to cause a suspicion of early involvement of these joints.¹

TREATMENT

Treatment consists, in the first instance, of aspiration of the abscess, and—if the pathological examination confirms the diagnosis by demonstrating pyogenic organisms in the pus—adequate drainage. The usual incision is one made parallel, and slightly internal to, the anterior third of the crest of the ilium, cutting through the muscles and opening the abscess behind the peritoneum. If the case is one of pyaemia, the best results are often obtained, as in other pyaemic abscesses, by withholding drainage until a definite abscess has formed. The subsidence of the local condition is usually satisfactory and rapid. A light extension may be applied to the thigh to overcome the flexion at the hip; this is especially indicated in children, in whom a pathological dislocation may readily occur, a complication which is extremely easily overlooked.

SUMMARY

The true origin of the acute psoas abscess may be difficult to decide, and although most of them are said to be secondary to a perinephric abscess or to suppuration in the iliac glands—diagnoses which are difficult to disprove—yet there can be little doubt that a certain number are pyaemic abscesses commencing within the muscle sheath. In favour of this supposition are: the antecedent illness so often present; the not infrequent occurrence of other pyaemic abscesses; the rapid subsidence of the local condition, so characteristic of the pyaemic abscess; and the lack of evidence of perinephric suppuration.

In one of the reported cases² the perinephric tissue was explored by the lumbar route, and it was not until the psoas sheath was opened that pus was found.

The three cases described in this paper are almost certainly pyaemic in origin, the abscesses being limited to the muscle sheath, no communication with surrounding structures being found.

I wish to express my gratitude to Mr. C. M. Page for permission to publish the first two cases, which were under his care at St. Thomas's Hospital, and to Dr. J. Menton for his advice and help.

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RECURRENT VOLVULUS OF THE PELVIC COLON

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It is perhaps justifiable to state that recurrent volvulus of the pelvic colon has not yet attracted a great deal of attention. Although its existence as a clinical entity has long been recognized, it seems likely that a considerable number of cases escape notice. The clinical features are inconstant, confusing, and evanescent, and, in addition, are often overshadowed by those of some intercurrent lesion. Also, it is not perhaps too much to say that recurrent sigmoid volvulus does not immediately occur to the investigator as a probable cause of obscure abdominal symptoms. Such cases are not invariably subjected to radiological investigation, and even when this is carried out the methods adopted are not always those best suited for the display of colonic anomalies. In our experience, however, recurrent sigmoid volvulus is not an extraordinary rarity, and it is our belief that, apart from the danger of fatal strangulation, it is responsible for a considerable amount of avoidable disability. The diagnosis in such cases can be of great difficulty; the clinical picture can easily be confounded with that of abdominal neurosis, colitis, or some pelvic trouble in women; and the differentiation from such conditions can only be effected by a close study of the clinical history, supplemented by a radiological investigation along modern lines.

LITERATURE

The standard textbooks of surgical and radiological diagnosis give adequate descriptions of the signs to be observed when the acute abdominal emergency has arisen. They are, however, unsatisfactory guides to the recognition of the recurrent type of sigmoid volvulus. Reference to the works of such authorities as Miles and Paterson Brown, Schinz, Baensch and Friedl, Albrecht, Kantor, Cawadiaz and Rankin, Bergen and Buie, shows that the special syndrome presented by this condition is either ignored completely or dismissed as a rarity of small practical importance. Edgren studied the previous clinical history in acute volvulus, obtaining prodromal signs in a large number; these might be either attacks of abdominal distension or simply obstinate constipation. The hereditary factors were emphasized by Greiffenhagen, and by Plaut, who attended both a father and a son with sigmoid volvulus. Lockhart-Mummery also described the two types of chronic volvulus, one with attacks of pain and distension, the other with attacks of obstinate constipation and discomfort. Radiograms illustrating potential volvulus were published by Jordan. The chronic obstruction due to incomplete volvulus has been described by Zachary Cope and by Braun. A helpful account of the syndrome of recurrent volvulus is given by Hamilton Bailey, who notes, besides the previous constipation and pain, the diarrhoea and passage of flatus following spontaneous reduction. Berg records a case of recurrent volvulus occurring in a megasigmoid in a young woman, with attacks of pain and distension in the left iliac fossa—the radiogram showed actual torsion of the mucous folds of the colon. Retzlaff has noted cases of this condition with attacks of pain and distension and obstinate constipation. The most important contribution to the study of sigmoid volvulus was made by Laurell, who described two cases, showing pain and watery blood-stained diarrhoea without local distension (von Wahl's syndrome). His article contains a full discussion of the pathology and symptomatology of sigmoid