CASE REPORTS

Psoas abscess without spinal disease: the value of lymphangiography in tuberculous lymphadenitis

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THE ASSOCIATION of psoas abscess with tuberculosis of the spine or sacroiliac joints is well recognized and occurs in about a fifth of such cases (Mercer & Duthie, 1964). It has long been known that psoas abscess may also occur without evidence of spinal disease, when it is often not of tuberculous origin. Mynter (1881) described cases of 'acute psoitis', and of the seven psoas abscesses without spinal disease reported by Rogers (1911), only two were tuberculous.

The non-tuberculous psoas abscess often appears to be of primary haematogenous origin (Zadek, 1950; Lam & Hodgson, 1966), and is particularly liable to occur in children (Mynter, 1881; Lam & Hodgson, 1966), in whom it may present as an 'irritable hip'. Of the various organisms responsible the commonest is the staphylococcus, and where antibiotics have been given the pus might be sterile (Lam & Hodgson, 1966). Occasionally secondary infection occurs in a haematoma due to trauma (Binns, 1966) or haemophilia (Tordoir, 1951).

Another mode of infection, both pyogenic and tuberculous, is by direct spread from adjacent structures. The psoas sheath is not a continuous sheet of tissue as suggested by Mynter (1881), but has defects where vessels and nerves penetrate. Perinephric infection can enter it *via* the defect inferiorly in the perinephric fascial layers (Aird, 1957). Appendix abscess, diverticulitis coli, intestinal perforations and even pleural infection were sometimes implicated (Tordoir, 1951).

Rogers (1911) postulated that suppurating or caseating lymph nodes in contact with the sheath could lead to psoas abscess, and anatomical considerations suggest that this could occur with posterior mediastinal as well as with retro-peritoneal nodes.

Thus psoas abscess presenting without a spinal lesion may require careful investigation in order to diagnose completely the underlying disease.

Two cases of tuberculous psoas abscess without spinal disease are reported below.

Case reports

Case 1

A 46-year-old Indian housewife who had been in England for 2 years presented at Leicester Royal Infirmary in March 1965. Although she spoke little English it was elicited that she had been constipated for several months, had been passing mucus but not blood per rectum and was anorexic and losing weight. For 2 weeks prior to admission she had evening pyrexia. Antibiotics had not been prescribed.

One year before she had been seen in another clinic because of low back pain of several years duration. At that time physical examination was normal, and the only abnormal finding was an unexplained ESR of 78 mm/hr.

The patient had no history of tuberculosis, but 4 years previously her husband had been treated for pulmonary tuberculosis in a sanatorium for 5 months.

On examination the patient was found to be wasted and there were large masses in both iliac fossae. No abnormality was found on rectal examination or sigmoidoscopy, no groin swellings were present, and the spine was fully mobile.

Investigations. Radiographs of the chest, spine and large bowel were normal. Hb 11.1 g/100 ml (hypochromic) ESR 71 mm/hr; WBC 7700/mm³ (normal differential); urine normal. The Mantoux reaction was positive at a dilution of 1 in 10,000.

Operation. At laparotomy all viscera were normal, and the swellings were found to be large bilateral psoas abscesses. It was noted that the iliac and paraortic nodes were not enlarged. The abdominal

wound was closed and the psoas abscesses drained by flank incisions, about 400–500 ml of greyish yellow pus being obtained from each side, specimens of which were sent separately for culture.

No pyogenic organisms were found on routine culture of the pus. In view of clinical probabilities anti-tuberculous therapy with streptomycin, isoniazid and PAS was started. The drainage sites soon healed over and within a few weeks the patient had gained weight and felt much better. When the culture for tuberculosis proved to be negative at 8 weeks, it was decided nevertheless to continue with a full 2-year course of anti-tuberculous therapy. It was presumed that the source of infection was caseating lymph nodes adjacent to the psoas sheath, possibly low posterior mediastinal nodes.

The patient was well when last seen 3 years after the psoas abscesses were drained.

Case 2

A well-educated 32-year-old Indian male Civil Engineer who had also been in England only 2 years was referred to Westminster Hospital in January 1968 complaining of pain in the left groin. His general health was good and there was no personal or family history of tuberculosis.

On examination an indefinite slight bulge was noted in the left groin. By the time he was admitted a month later the physical signs were characteristic of a psoas cold abscess. The swelling below the left inguinal ligament was confluent with a large swelling in the left iliac fossa. No other abnormality was noted on examination, his spinal movements were normal and sigmoidoscopy showed no abnormality.

Investigations. Hb 13.4 g/100 ml; WBC 5500/mm³ (normal differential); ESR 29 mm/hr; urine normal; radiographs of chest, spine and pelvis were normal. The Mantoux reaction was positive at a dilution of 1 in 10,000, and the Frei test negative. An IVP was normal except for medial displacement of the middle third of the left ureter.

When the abscess was drained by a groin incision about 500 ml of greyish yellow pus was obtained. Digital exploration showed that the abscess tracked up along the psoas sheath, with the external iliac artery antero-medial to the cavity.

Pus was sent for culture immediately and swabs from the wound were sent on 2 consecutive days. No pyogenic organisms were isolated.

As it seemed likely by a process of elimination that the abscess was secondary to caseating lymph nodes, lymphangiography was carried out (Kinmonth, 1954) using lipiodol injected into dorsal lymphatics of both feet. This was thought likely to be of help not only in diagnosis but in following

progress on treatment, as the dye persists in the nodes for some time.

Lymphangiography showed that the iliac and para-aortic nodes on the left were enlarged and that those on the right were normal (Figs. 1 and 2). The foamy

FIG. 1. Lymphangiographic appearances before anti-tuberculous treatment.

appearance seen in the higher involved nodes were those of a non-specific inflammatory condition sometimes indistinguishable from a malignant reticulosis. Nodes lower down showed filling defects presumed due to caseation.

With the diagnosis of tuberculosis made on clinical probabilities anti-tuberculous therapy was started. The patient soon felt better generally and the groin wound soon dried up.

Of the three separate specimens sent for culture, a lone colony of tubercle bacilli was isolated from one of the swabs. This emphasizes the difficulty often found in bacteriological confirmation of the diagnosis of tuberculosis.

Plain radiographs showed gradual diminution of the size of the involved nodes, which were almost normal in size 5 months after treatment had started (Fig. 3).

FIG. 2. Initial oblique view of the worst-involved nodes.

FIG. 3. The appearances after 5 months of anti-tuberculous treatment.

Discussion

With the main exceptions of alimentary tuberculosis and cervical lymphadenitis, most extrapulmonary tuberculosis is the result of haematogenous spread (Berry, 1961). At the stage of active primary infection the bacilli are filtered out by the reticulo-endothelial system including lymph nodes, where the infection may not be clinically apparent. At any time after the primary infection these nodes may break down to present as clinically significant tuberculosis. This usually occurs within a few years, but sometimes takes much longer (Schless & Wier, 1957).

Mitty & Faegenburg (1964) thought that isolated tuberculous involvement of retro-peritoneal nodes was rare. This is no doubt true of those which present clinically, but in view of the relative difficulty in palpation of these nodes retroperitoneal tuberculous lymphadenitis may be more common than is realized. Baer, Bennett & Nachlas (1923), writing at a period when tuberculosis was more widespread, stated that lumbar lymphadenitis of tuberculous origin without evidence of involvement of the usual visceral sources was relatively so common as to deserve special mention.

In an American series of 120 cases of tuberculous lymphadenitis, Schless & Wier (1957) recorded no retro-peritoneal node involvement, the majority of their cases being cervical or mediastinal. Nearly all presented before the age of 40 years, and about half had some clinically demonstrable form of tuberculosis other than lymphadenitis. They postulated an ethnic variation in susceptibility to tuberculous lymphadenitis, for whereas American Army negroes seemed less prone to tuberculosis in general, they were more prone to tuberculous lymphadenitis than white soldiers. It is our clinical experience that in adults clinically active tuberculous lymphadenitis is relatively much more common in Indian immigrants than in natives of this country.

Bacteriological confirmation of tuberculosis may be difficult, as shown by our cases, and the diagnosis may often be strongly presumed without this. A negative tuberculin reaction especially if negative again after 6 weeks virtually excludes tuberculosis (Schless & Wier, 1957). Other infections such as lymphogranuloma inguinale must be considered.

Treatment of active tuberculous lymphadenitis with drugs is sometimes thought to be less essential than in other forms of tuberculosis, possibly because of favourable impressions from the usual natural history in children. Schless & Wier (1957) argued convincingly, certainly as far as adults were concerned, for a full course of anti-tuberculous therapy and thought that isoniazid should be one of the drugs used. On this regime they had had no relapse at a minimum follow up of 2 years, and in contrast with earlier cases not given adequate chemotherapy.

Lymphangiography has been used previously to show the extent of retroperitoneal tuberculous lymphadenitis (Babeau & Fournier, 1965). The foamy appearance shown in their cases was similar to that in Case 2 and to that in another case of retro-peritoneal tuberculous lymphadenitis without abscess formation seen at Westminster Hospital.

Lymphangiography was found invaluable in Case 2 above, both in confirming the origin of the infection and in assessing progress to treatment. The lipiodol is cleared sufficiently slowly from the nodes, which are otherwise difficult to assess, to be useful in monitoring the response to treatment for up to a year. If the lipiodol is cleared too soon, the endolymphatic injection can be repeated.

The single most valuable study in the diagnosis of retroperitoneal tuberculosis was said by Mitty & Faegenburg (1964) to be intravenous urography, but although this investigation is still of value, perhaps pride of place should now be given to lymphangiography.

Although experience is limited at present, the 'foamy' radiological appearances of the nodes seem indistinguishable from those in various reticuloses, so bacteriological or histological confirmation of tuberculosis is advisable.

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Massive oedema and ascites during treatment with anti-depressant drugs

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THE OCCASIONAL occurrence of dramatic side-effects in patients taking anti-depressant drugs, particularly the monoamine oxidase inhibitors, as well as the interaction of these with other drugs and with foodstuffs, have been the subject of much interest and concern. Although oedema of the ankles has been noted by several workers in patients on isocarboxazid ('Marplan') (Azima *et al.*, 1959; Griffith, 1960; Mock, Panero & Robinson, 1961) on amitriptyline ('Tryptizol') (Weiss & Pressman, 1961) and also where combined anti-depressant drug therapy has been employed (Gander, 1965), the develop-

ment of massive oedema would appear to be unrecorded. For this reason the following case is reported.

Case report

Mrs A.G., a housewife aged 64, was attending the Psychiatric Out Patient Department because of symptoms of anxiety and depression. On 7 March 1967 she was started on diazepam ('Valium') and protriptyline ('Concordin'), following which there was minimal improvement and there were no apparent side-effects. On 31 August 1967 her drug regime was changed to isocarboxazid 10 mg t.d.s., amitriptyline 25 mg t.d.s. and diazepam 20 mg nocte.

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