POST-TRAUMATIC ILIACUS ABSCESS*

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An abscess in, or deep to, the iliacus muscle is apparently uncommon, but may occur more often than is believed, because the diagnosis is overlooked in an appreciable number of cases.

Five cases have come to my attention in the course of the past 6 years and, since the diagnosis and treatment are beset by problems and difficulties, this experience seems to be worthy of analysis and record.

THE CAUSE

In one case, the patient was thrown from his horse and, in falling, one leg was severely wrenched when it remained temporarily fixed in a stirrup. In 2 other cases, men skidded on a slippery floor for a short distance, lost their balance and fell in a 'splits' position with their lower limbs spread wide apart. Another story was that of a man who also landed in a 'splits' position after tripping over a chain. The fifth case was that of a workman who fell off scaffolding, his one thigh being wrenched when it caught in a steel bar which momentarily delayed his fall.

THE MECHANISM OF INJURY

In each case, a violent abduction strain was applied to the thigh; in 4, hyperextension of the femur as an additional strain could be inferred from the description given, while in 1 of these, external rotation as a third element of mechanical force was recognizable.

CLINICAL FEATURES

Pain of immediate onset, high up the inner side of the thigh, was common to all cases. In 3 of the injuries, pain

* A paper and case demonstration presented to a clinical meeting at the Workmen's Rehabilitation Centre, Johannesburg, on 24 August 1961.

and maximal tenderness were fairly accurately situated beneath the tendon of origin of the adductor longus muscle; the tendon itself was also tender when grasped between the finger and thumb, and this sign suggested a diagnosis of sprain of the adductor longus.

Review of the anatomy of the region suggests the likelihood of pain and tenderness being situated further laterally — in fact in the femoral triangle, but this localization did not appear in this series.

In addition to the pain just distal to the groin, 4 men also had pain in the iliac fossa of the same side. There were 2 examples where, in addition, there was low back pain to one side of the midline at the level of the lumbosacral junction; radiation of pain down the antero-medial aspect of the thigh was reported in 2 instances.

In addition to local tenderness over the upper inner thigh, pain was induced in this area and also in the iliac fossa by extension, abduction and external rotation of the thigh. Four of the men held the affected thigh in a degree of flexion and walked with a limp.

In 2 cases, one within several days of the injury, and the other 4 weeks later, a swelling appeared in the upper part of the medial side of the thigh; the diffuse and tender swelling was most noticeable towards the medial side of the femoral triangle and extended deep to the adductor longus. Both of these swellings progressed to frank abscesses and were drained surgically in the belief that they were localized to the thigh. In 1 case, 9 weeks after the injury, a perineal abscess presented and discharged through 3 sinuses; this was initially diagnosed as a fistula-in-ano following upon an ischiorectal abscess. In 2 other instances, where pain and deep tenderness in the iliac fossa became the outstanding clinical evidence, a mass of poor definition became palpable deep in the iliac fossa.

Fever of irregular character was recorded in all cases, and the persistence of fever was one of the important indications for further search to find the cause. The rider injured by falling from the horse was the only one to form an abscess above the iliac crest; this followed 3 months after the abscess in the thigh. The higher abscess was drained, and a chronic discharging sinus remained. His condition was thought to be due to vertebral osteomyelitis, but repeated negative X-rays, including sinograms, finally negated this diagnosis.

This same patient presented another difficult feature; while undergoing investigation in hospital he had a severe haemorrhage per rectum. Sigmoidoscopic appearances and 'empiric' therapy suggested amoebiasis, but laboratory tests were negative.

DIAGNOSIS

There was only 1 example of the diagnosis being established radiologically. An opaque medium injected into a discharging sinus just lateral to the tendon of the adductor longus could be traced into the hollow of the ilium deep to the iliacus muscle. In the remaining cases, the diagnosis was ultimately resolved after exclusion of other suspected conditions, which included vertebral, ischial and pubic osteomyelitis, psoas abscess, rectal fistula, sprain of adductor longus with haematoma and abscess formation, femoral hernia, appendicitis with appendicular abscess, and iliac and inguinal adenitis. In 3 instances, the diagnosis, although delayed, was confidently made, but in 2 it was rather tentative, and the operative treatment was looked upon as exploratory. In 1 instance only was the diagnosis established, and definitive treatment instituted, within a week of the injury; in the remainder, the delay varied from 7 weeks to 25 months.

TREATMENT

The surgical approach is through an oblique incision, about 1 inch medial to the anterior superior iliac spine, extending for an inch or so above the level of the spine, and continuing downwards parallel to the inguinal ligament for a distance of about 3 inches. The peritoneum is not opened, but it is displaced with its contents medially, so revealing the sheathed iliacus muscle. The sheath is cut with a scalpel parallel to, and more medial than, the line of the skin incision; the muscle bundles are separated by a coarse, strong Spencer-Wells forceps, and this opening is enlarged by finger dissection, the fingers reaching bone beneath the muscle. The abscess is readily found as a distinct and recognizable entity separating muscle from bone and extending downwards towards the thigh.

Drainage of this deeply and awkwardly placed abscess is a mechanical problem. Anterior drainage is extensively impeded when the muscle bundles and the peritoneum fall back into place, and gravity cannot be brought into play to a sufficient extent. In addition to anterior drainage, posterior drainage *via* the gluteal region and through the bony plate of the ilium is established directly into the abscess cavity.

Appropriate antibiotics and general supportive treatment are also given. In all cases staphylococci were cultured; in 3 as the only organism, in 1 they were mixed with streptococci, and in 1 with *B.coli*.

RESULTS

In 1 case, that of the horserider, the follow-up has been inadequate, since the patient returned to his farm in the Eastern Transvaal and, apart from his one letter of thanks for the 'cure', he has not been heard of again. Three other patients were followed for 7 months - 1 year, and they were symptom-free during that period. The fifth patient was operated upon only a few weeks ago; he appears to be 'cured', but it is too early to be definite.

SUMMARY

A review of 5 patients who developed abscesses deep to the iliacus muscle, following injury, is given.

The mechanism of the injury, the clinical features, the diagnosis and the treatment are discussed. The difficulties in diagnosis and treatment are emphasized.

It is pointed out that the condition may not be as uncommon as is usually believed.