Ileopsoas abscess: Review of 24 cases

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Abstract

Twenty four cases of ileopsoas abscess in children were studied. There were 5 cases of spinal tuberculosis with psoas abscess. One out of the 5 cases had bilateral psoas abscess with destruction of lumbar 3 and 4 vertebra with exposed spinal cord along with paresis of both lower limbs.

Nineteen cases had pyogenic psoas abscess. There were 8 cases of right sided and 6 cases had left sided flexion contracture of hip joint which were corrected by Buck’s traction. The treatment and management of all the cases are discussed.

Introduction

Infection in psoas muscle is common in Bangladesh but uncommon in Western countries. Infection occurs due to specific and nonspecific organisms. Mycobacterium tuberculosis is a common cause. S aureus, E coli, S faecalis, Pseudomonas aeruginosa, Klebsiella oxytoca, Clostridium welchii, Pasteurella multocida and Yersinia enterocolitica are the other possible organisms. Again psoas muscle can also be infected by (I) Suppurative retroperitoneal lymphadenitis, (2) Direct extension of an abscess, (3) Haematogenous spread and (4) Secondary Infection of traumatic intramuscular haematoma. It is not difficult to diagnose the case when patient presented with high temperature, high leucocyte count, high ESR with reduced haemoglobin percentage.

Sometimes there is confusion when presented with non-specific febrile illness with mild to moderate rise of leucocyte count. It is challenging when they co-exist with spinal disease. In some series there is increased morbidity and mortality rate especially in debilitated patients with pre-existing disease.

In this country a patient usually does not attend the hospital early. He attends the hospital only when there is complication. In this series most of the patients came from poor families. Early detection and prompt treatment is necessary to cure the patient as well as to avoid further complications. We discuss here the clinical presentation, treatment and management of children presenting with ileopsoas abscess.

Patients and Methods

Twenty four cases of ileopsoas abscess were studied for three years. There were 17 cases from Rehabilitation Institute & Hospital, 5 cases from Rangpur Medical College and 2 were from a private clinic in Rangpur. Age of the patients varied from 1 to 13 years and mean age was 7.45 years (Table-I). There were 21 (87.5%) male and 3 (12.5%) female patients.

After admission detailed history and clinical examination were done. Routine blood and urine investigation, plain X-ray of KUB region and Mantoux test were done in some cases. Culture was also done.

Results

24 cases of psoas abscess with hip contracture (14) were treated. 5 out of 24 cases had spinal tuberculosis and rest 19 cases had non-
specific pyogenic infection.

Routine blood investigation revealed 5 cases showing relative lymphocytosis with high ESR (above 50mm/1st hour Westergren Method), 14 cases had high leucocyte count.

Plain X-ray revealed dense psoas shadow. There was destruction of dorsal vertebra 8-9, 9-10 with gibbus at the same level in two cases. One case showed destruction at L3-4. Thirteen cases had right sided, ten cases had left sided & one had both sided ileopsoas abscess. Eight cases had right sided & 6 cases had left sided flexion contracture of hip joint, which varied from 15° to 300° with further range of movement.

Management

Twenty three cases needed surgical evacuation of pus. One case was treated conservatively i.e. with antitubercular drugs. The pus gradually absorbed and swelling subsided within 6 months. One out of 4 cases of spinal tuberculosis with psoas abscess needed extensive surgery i.e. evacuation of pus, curettage of lumbar vertebra with homogenous bone graft to stabilise spine. The patient was kept in body plaster for 3 months.

All 5 cases of spinal tuberculosis with psoas abscess received full course of anti - TB drugs (Singapore Regimen). Rest 19 cases received broad spectrum antibiotics according to culture & sensitivity report. Wound healed by first intention, contractures were corrected by Buck's traction with gradual increase in weight (from 21lbs to 5 lbs). High protein diet along with vitamins was provided. Recovery of non-tubercular patient was complete within 15 to 20 days while recovery from tubercular abscess was long; it took up to 10 months in some cases.

Discussion

In these series 24 cases were studied. All were children (21 boys & 3 girls). 5 out of 24 cases had spinal tuberculosis with psoas abscess. One out of five had spinal tuberculosis with bilateral psoas abscess with paresis in lower limbs who had extensive damage of lumber 3-4 vertebra with exposed spinal cord. 4 cases had flexion contracture to hip joint. (2R, 21).

Ranges of flexion contracture varied from 20 degrees to 30 with further range of movement.

L. Isabel studied 5 cases of pyogenic psoas abscess which were treated surgically. One out of 5 cases was a child of 12 years old female who had S aureus infection and other one had mixed enteric organism infection. The same pathogens were also found in other published series. In Isabel’s series there was no flexion contracture of hip joint. 4 cases out of 5 who had tubercular infection were treated surgically and one case treated conservatively. Flexion contracture was corrected by Buck's traction with gradual increase of weight from 2 to 5 l b s.
All the five cases received full course of antitubercular drugs (Singapore Regimen). Blood count and ESR gradually returned to normal. Patients’ appetite increased and they started feeling better with increase of body weight one month after getting antitubercular drugs. In this series one case needed evacuation of pus, curettage and homogeneous bone graft (from mother) to stabilize spine. In Isabel's series one case needed bone graft. In this series one case also needed bone graft. Here body cast was also applied and kept for 3 months. In both cases bone grafts were incorporated. All 5 cases of this series had full recovery within 6 to 10 months. Contracture of hip joint also corrected within 10 to 20 days. 14 cases out of 24 had S aureus infection and 5 cases has psoas abscess due to mixed enteric organism. 10 cases of pyogenic psoas abscess had also flexion contracture of hip joint. (SR+4L). All 19 cases also treated by surgical drainage and contracture also corrected by Buck's traction. All the cases (19) of this series became well within 10-20 days. There was no death reported.

In Isabel's series all cases presented with fever, leucocytosis and a very high ESR. Diagnosis was established by CT scan. But in one case it failed to identify the pathology. In this series all cases had fever and high ESR. 5 cases of this series had relative lymphocytosis and the rest had high leucocyte count. All cases of this series got admission late with complications. Diagnosis was done mainly on clinical basis. Several papers described the use of percutaneous route for drainage of psoas abscess with good result and it may well be a better approach to certain patients. In this series and also in Isabel's series cases were drained on emergency basis as soon as diagnosis was reached. Isabel used a grid iron incision which was used to approach extraperitoneal plane. In this series one case needed retroperitoneal approach and 22 cases needed incision through petits triangle. In this modern world major improvement has been established to perform early diagnosis as well as therapeutic facilities for treatment. In spite of these facilities in some series there had been reported mortality rate as high as 100%. Therefore early diagnosis and prompt measure are essential to avoid and to reduce morbidity and mortality rate in children.

In 1881 Mynter studied two cases of pyogenic psoas abscess. He considered this as psoasitis. He drained the pus below inguinal ligament. However in this series 22 cases were drained through petits triangle and another case through retroperitoneal approach. In 1911 Roger reported seven cases of psoas abscess that originated from lumbar lymphatics. In 1930 Behrman reported 4 cases and in 1950, Zadek reported 7 cases. All were apparently of primary origin. In 1961 Altemeier and Alexander reviewed series of retroperitoneal abscess and postulated direct extension to involve psoas muscle. In this series 5 cases held direct extension from spinal tuberculosis.