CASE REPORT

Chronic arthritis of the hip joint: an unusual complication of an inadequately treated fistula-in-ano

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SUMMARY

We report a case of chronic arthritis of the right hip joint in an otherwise healthy young male athlete as a complication of inadequately treated anal fistula. A young male athlete presented with symptoms of right hip pain and difficulty in walking and intermittent fever for 2 months. He had a history of perianal abscess drainage. On examination he was found to have a tender right hip joint with severe restriction of movements. He was also found to have a partially drained right ischio-rectal abscess. X-ray and MRI of the hip joint revealed chronic arthritis of the right hip joint, which was communicating with a complex fistula-in-ano. He underwent a diversion sigmoid colostomy and right ischio-rectal abscess drainage along with appropriate antibiotics with a plan for definitive hip joint procedure later. He was lost to follow-up and succumbed to severe perianal sepsis within a few months.

BACKGROUND

Fistula-in-ano is a common surgical condition where an abnormal tract or cavity connects the rectum or anal canal with any other epithelialised surface, usually the skin.¹ The common presentation is of intermittent perianal pus discharge and episodes of perianal suppurative collection requiring emergency surgical drainage. We present a rare case of inadequately treated and neglected fistula-in-ano, which progressed to cause chronic arthritis of the right hip joint leading to severe disability in an otherwise healthy young adult. This case underscores the need for timely and adequate surgical management of fistula-in-ano to avoid severely disabling and life-threatening complications.

CASE PRESENTATION

A 23-year-old athlete presented to the orthopaedic department with chronic pain in the right hip of 2-month duration, associated with difficulty in walking. He also gave history of intermittent fever and perianal pus discharge and had undergone left perianal abscess drainage in another centre 4 years earlier; he had also undergone right-sided perianal abscess drainage 1 month prior. He continued to have intermittent fever and perianal pus discharge from the incision site.

On examination he was bed bound with severe restriction of movements of his right hip. He was also found to have a right partially drained perianal abscess (figure 1). An X-ray of the right hip showed near total destruction of the right hip joint

Figure 1 Photograph showing right ischio-rectal abscess taken in left lateral position after incision and drainage.

(figure 2) and MRI of the pelvis showed a complex fistula-in-ano with branching tracts, with one of the tracts communicating with the right hip joint and evidence of chronic arthritis (figures 3 and 4).

The patient underwent an examination under anaesthesia and drainage of the residual perianal abscess, which was extending to become an ischio-rectal abscess. An internal opening was palpable at 6 cm from the anal verge in the right lateral rectal wall. Additionally, the patient also underwent a loop sigmoid colostomy for faecal diversion in view of severe perianal sepsis and complex fistula-in-ano causing right hip joint chronic arthritis. Emergency hip joint drainage was not warranted as there was no acute infected collection requiring drainage and the right hip joint had already progressed to a stage of chronic arthritis. The patient was kept under upper tibial traction for his right hip joint pain in the orthopaedics ward after which the pain subsided; he was later discharged with a plan for a definitive operative procedure of the hip joint once the perianal sepsis subsided.

INVESTIGATIONS

X-ray of the hip joint, MRI of the pelvis.

TREATMENT

A diversion sigmoid colostomy, and incision and drainage of the partially drained right ischio-rectal abscess were performed and the patient was started on antibiotics.

OUTCOME AND FOLLOW-UP

In the immediate postoperative period, the patient and relatives were taught perianal wound care and care of the stoma by specialised stoma care nurses.

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Figure 2 Plain radiograph frontal view of the pelvis with both hip joints, showing right hip joint narrowing and subchondral destruction with associated ill-defined sclerosis of the femoral head and acetabulum. Note the protrusio acetabuli in the right hip joint due to bone softening and destruction.

The patient was also subjected to right upper tibial traction following which the right hip pain subsided. Subsequently, he was discharged on analgesics and oral antibiotics to follow-up in the outpatient clinic. In the outpatient clinic, he underwent a sigmoidoscopic examination, which was normal. Histopathological examination results of the fistula tract had revealed inflammatory granulation tissue with foci of acute inflammatory exudate and no granulomas. Bacterial culture had grown *Pseudomonas aeruginosa*, *Enterococcus* and *Escherichia coli*. Cultures were negative for *Mycobacterium tuberculosis* by MGIT (mycobacteria growth indicator tube) method, Lowenstein Jenson (LJ medium) method and Xpert TB PCR test. The patient was planned for a definitive hip joint replacement procedure once perianal sepsis had resolved. Unfortunately, he decided to continue treatment at his home town and succumbed to severe perianal sepsis 1 year after discharge from our hospital.

DISCUSSION

A fistula-in-ano is a chronic manifestation of an acute cryptoglandular infection progressing to abscess formation.² When the

Figure 4 Axial fat-suppressed T2-weighted MRI through the pelvis showing inflammation and collection in the right ischioanal fossa, tracking medially with internal opening in the right lateral wall of the anal canal (white block arrow).

abscess bursts or is drained, it forms an epithelialised tract extending from the abscess in the anal canal or the rectum to other epithelialised surface, usually the skin. This results in chronic infection with recurrent pus discharge. Adequate and timely surgical treatment of fistula-in-ano will avoid unwanted and occasionally serious complications such as perianal suppurative collections, fistulisation to adjoining organs and destruction of the anal sphincter complex. The most common aetiology of fistula-in-ano is cryptoglandular infection. Other less common causes include Crohn's disease, diverticulitis, anorectal malignancy and tuberculosis. Anal fistula due to Crohn's disease are known to fistulise to adjacent areas,^{3 4} but non-Crohn's fistula-in-ano extending to involve adjacent areas such as the hip joint is quite uncommon. Very rarely, perianal fistula can progress to cause severe life-threatening perianal sepsis.

Chronic arthritis is defined as chronic inflammation involving a joint resulting in destruction of the joint cavity and its associated bones. It may be a sequela of acute septic arthritis⁵ or it can be due to a chronic inflammatory process. In this case report, the focus of the infection was within the fistula-in-ano, which provided the bacterial pathogen to the hip joint resulting ultimately in near complete destruction of the right hip joint. It is important to rule out other, less common causes of perianal abscess/fistula such as Crohn's disease and Tuberculosis before definitive treatment of the hip joint. Thus treatment of the

Figure 3 Fat-suppressed T2-weighted coronal images (A) through the pelvis, showing the fistulous tract (white arrows in (A) tracking superiorly from the external opening in the right gluteal region. Axial fat-suppressed T2 MRI at the level of superior aspect of the hip joint (B) showing the tract communicating with the right hip joint (white block arrow). The marrow oedema, destruction of femoral head, synovial thickening and protrusio acetabuli are also seen (white star).

infection was performed with a sigmoid colostomy for diversion of faeces and right ischiorectal abscess drainage, and starting of antibiotics, which would help treat chronic infection of the right hip joint, thus preventing further destruction of the hip joint.

Learning points

- ▶ Chronic arthritis of the hip joint as a complication of anal fistula is unusual.
- ▶ A history of perianal sepsis or previous perianal operation warrants a thorough examination of the anal canal preferably by an expert in the field.
- ▶ Deep seated perianal suppurative collection should be adequately drained and the patient should be on regular follow-up until complete resolution of the disease.

Competing interests None.

Patient consent Obtained.

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