

## **INTRODUCTION**

Perianal fistula is an abnormal communication between the anal canal and perianal skin. The majority of perianal fistulous disease results from either cryptoglandular inflammation or Crohn's disease. These groups differ in pathophysiology, prognosis, and strategies for imaging and treatment.(1)

Endoanal ultrasound and magnetic resonance imaging represent current imaging strategies for evaluating perianal fistulas and may be used alone or in combination. The use of multiple imaging planes and sequences including fat suppression and contrast enhancement optimize the magnetic resonance imaging protocol.(2)

Fistula in ano is a frequent disease, which often has a difficult diagnosis and mapping, and comports significant morbidity(1). Today, Magnetic Resonance imaging (MRI) allows a rapid, simple and precise mapping of peri anal fistula, which leads to a correct surgical treatment.(2)

Magnetic resonance (MR) imaging has been shown to demonstrate accurately the anatomy of the perianal region. In addition to showing the anal sphincter mechanism, MR imaging clearly shows the relationship of fistulas to the pelvic diaphragm (levator plate) and the ischiorectal fossa.(3)

MR imaging also has had a major impact on the preoperative assessment of perianal fistulas in centers specializing in their surgery and it is considered the optimal technique for discriminating complex from simple perianal fistula. These complex fistulae are often complicated with recurrence and anal incontinence(4).

The correct balance between eradication of infection and maintenance of continence depends upon accurate preoperative assessment of fistula, detection of the site and level of any internal opening, anatomy of primary track and presence of any secondary extensions. The knowledge of the anatomy of the anal canal and perianal structures has grown rapidly over last decades by MRI.(5)

Some author proved that accurate preoperative assessment of fistula-in-ano is mandatory if the fistula is not to recur(6).

In recent years, MRI has become pre-eminent for fistula assessment and recent studies have shown that not only is MRI more accurate than surgical assessment, but that surgery based on MRI can reduce further disease recurrence by approximately 75%. The main role of MRI is to alert the surgeon to fistula tracks and extensions that would otherwise have gone undetected and, thus, untreated at the time of surgical assessment under general anaesthetic.(7)