



INCIDENCE OF PERIANAL FISTULAS MRI-EVALUATION

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ABSTRACT **BACKGROUND**--Perianal fistulization is an inflammatory condition that affects the region around the anal canal, causing significant morbidity and often requiring repeated surgical treatments due to its high tendency to recur, so precise evaluation of perianal fistula with imaging and their classification needed for treatment and prevent future complication. MRI provides accurate information for appropriate surgical treatment, decreasing the incidence of recurrence and allowing side effects such as damage to sphincter and fecal incontinence to be avoided

MATERIALAND METHODS: This prospective interventional clinical study analyzes 50 patients diagnosed with open fistula in anus .

RESULT:—classified in two types - St James's University Hospital MR imaging–based grading system also Parks system

CONCLUSION—MR imaging has emerged as the imaging technique of choice for preoperative evaluation of perianal fistulas, providing a highly accurate, rapid, and noninvasive means of performing pre- surgical assessment

KEYWORDS : Perianal fistulization, MRI role, Parks classification, St James's University Hospital classifications.

INTRODUCTION

A fistula is defined as an abnormal connection between two structures or organs or between an organ and the surface of the body. In the case of perianal fistula, it is a connection between the anal canal and the skin of the perineum.

Prevalence of 0.01% and M;F ratio

It predominantly affects young males, with a male-to-female ratio of 2:1. The most common presenting symptom is discharge (65% of cases), but local pain due to inflammation is also common. Successful surgical management of anal fistulas requires accurate preoperative assessment of the course of the primary fistulous track and discuss the role of imaging techniques in evaluation of perianal fistulas, the protocol applied at our institution to assess perianal fistulas, and recent advances in MR imaging evaluation of perianal fistulas the site of any secondary extension or abscess .

The two main classification systems for perianal fistula:
The Parks and the St James's University Hospital classifications

OBJECTIVES

We discuss the role of MR imaging techniques in evaluation of perianal fistulas, the protocol applied at our institution to assess perianal fistulas, and recent advances in MR imaging evaluation of perianal . We then describe location of anal fistulas by the two main classification systems for perianal fistula:- the Parks and the St James's University Hospital classifications.

MATERIALANDMETHODS

STUDY DESIGN. This prospective interventional clinical study is conducted in our hospital in the period of 12 months.

Patients. 50 patient with perianal fistula included in this study .

RESULTS

Two main classification systems for perianal fistulas:
The Parks classification and the St James's University Hospital classification

Parks Classification

Fistulas were classified into four groups: inter-sphincteric, trans-sphincteric, supra sphincteric, and extra sphincteric. In the Parks classification, the external sphincter is used as the keystone

1. Intersphincteric fistulas accounted for --(20 cases of 50) (40%). The track runs along the longitudinal muscle layer between the internal and external sphincters and may reach the peri- anal skin through or medial to the subcutaneous external sphincter.
2. In transsphincteric fistulas (26 cases of 50)--(52%), the track passes from the intersphincteric space through the external sphincter into the ischioanal fossa.
3. In suprasphincteric fistulas (4 of 50 cases)-- (8%), the track progresses upward into the intersphincteric space, passes over the top

of the puborectalis muscle, then descends through the levator plate to the ischio- rectal fossa and finally to the skin.

4. The extrasphincteric fistula 0 (0% of cases in the study) In extrasphincteric fistulas, the track passes from the perineal skin through the ischio- rectal fossa and levator muscles then into the rectum. Thus, this fistula lies completely outside the external sphincter complex.

Parks Classification Table 1

Grade	Number of patient	Percent
I	20	40
II	26	52
III	04	8
IV	0	0

St James's University Hospital Classification

This classification is simple to apply because it uses anatomic landmarks in the axial plane familiar to radiologists. Furthermore, the classification considers the primary fistulous track as well as secondary extensions and abscesses in evaluating and classifying fistulas

Grade 1: Simple Linear Inter sphincteric Fistula.— In a grade 1 fistula, the track extends from the anal canal through the inter sphincteric space to reach the skin of the perineum or natal cleft. No extensions or abscesses are found in the inter- sphincteric space or ischioanal and ischioanal fossae-13—(25.9%)

Grade 2: Intersphincteric Fistula with an Abscess or Secondary Track.—In a grade 2 fistula, the primary track and a secondary track or abscess occur in the intersphincteric space 7 cases (12..2%)

Grade 3: Transsphincteric Fistula.—A grade 3 fistula pierces both layers of the sphincter complex and takes a downward course through the ischioanal and ischioanal fossae before reaching the perineal skin.—9 cases (17.7%)

Grade 4: Transsphincteric Fistula with an Abscess or Secondary Track in the Ischioanal or Ischioanal Fossa.—In a grade 4 fistula, the track crosses the external sphincter to reach the ischioanal and ischioanal fossae, where it is complicated by an abscess or extension 17 cases—(35.2%)

Grade 5: Supralelevator and Translevator Disease.—In rare cases, perianal fistulous disease extends above the insertion point of the levator anus muscle supralelevator fistulas extend upward through the intersphincteric plane, pass over the top of the levator ani and puborectalis muscles, then descend through the ischioanal and ischioanal fossae to reach the skin 4 cases —(8.4%) Translevator disease, the fistulous track extends directly from its origin in the pelvis to the perineal skin through the ischioanal and ischioanal fossae, with no involvement of the anal canal.

St James's University Hospital Classification TABLE 2

Grade	No of patients	Percent
I	13	25.9
II	07	12.2
III	09	17.7
IV	17	35.2
V	04	8.4

The fistulas were classified with the St James's University Hospital MR imaging–based grading system.

Of the 50 patients, 13 (25.5%) had a grade 1 or simple linear intersphincteric fistula;

07 (12.2%) had a grade 2 or intersphincteric fistula with an abscess or secondary track;

09 (17.7%) had a grade 3 or transsphincteric fistula;

17 (35.2%) had a grade 4 or transsphincteric fistula with an abscess or secondary track in the ischioanal or ischioanal fossa; and

04 (8.4%) had grade 5 or supralelevator and translevator disease

CONCLUSIONS:

MR imaging has emerged as the imaging technique of choice for preoperative evaluation of perianal fistulas, providing a highly accurate, rapid, and noninvasive means of performing pre-surgical assessment.

MR imaging provides precise definition of the fistulous track, along with its relationship to pelvic structures and anal spinctres, and allows identification of secondary fistulas or abscesses.

Accordingly, MR imaging provides accurate information for appropriate surgical treatment, decreasing the incidence of recurrence and allowing side effects such as damage to internal sphincter complex and fecal incontinence to be avoided.

Radiologists familiar with the anatomic and pathologic findings of perianal fistulas and classify them using the St James's University Hospital MR imaging–based grading system.

In this way, appropriate surgical management can be planned and recurrences can be prevented.

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