

The value of routine histopathological analysis in patients with fistula in-ano

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Abstract

Objective To determine the positive yield of routine histopathology in patients undergoing surgery for fistula in-ano.

Method Histopathology reports of all the patients who underwent surgery for fistulae-in-ano over a period of 36 months were reviewed.

Results Analysis included 84 patients of which 73 (87%) were male subjects. The mean age was 39.4 years (range 11–68). Forty-one (49%) had recurrent fistulae. Granulomatous diseases such as Crohn's disease and tuberculosis (TB) were suspected in six patients. However, of the six patients, confirmation of the disease status was

obtained only in three patients: stains for acid-fast bacilli confirmed TB in two (2.4%) patients and colonoscopy and biopsy confirmed Crohn's disease in one (1.2%) patient. All three patients had recurrent fistulae.

Conclusion As the positive yield of routine histopathology is minimal, we do not recommend routine histopathology for fistula in-ano, except for those presenting with recurrent fistulae and those with clinical suspicion of an underlying disease such as TB, HIV or Crohn's disease.

Keywords Fistula in-ano, histopathology, tuberculosis, Crohn's disease

Introduction

Fistula-in-ano is a common benign anal condition encountered in general surgical practice with a mean incidence of 8.6 per 100 000 population [1]. Most of the simple anal fistulae have a benign course, but complex, recurrent fistulae are associated with a chronic course and frequent acute exacerbations requiring repeated surgical interventions.

In addition, these repeated surgical interventions carry a significant risk of damaging the anal sphincter mechanism that may even result in anal incontinence [2–5].

Some of these fistulae may have a medically manageable underlying aetiology such as Crohn's disease, tuberculosis (TB) or actinomycosis. Histopathological analysis of the surgical specimens in these patients may facilitate the diagnosis of above aetiological factors. Studies analysing the histopathology of resected surgical specimens in patients with perianal fistulae are very few [6].

Method

The histopathology reports of all the patients who underwent surgery for fistulae-in-ano over a period of 36 months at the University Surgical Unit of the National hospital of Sri Lanka were reviewed. The age, gender and the histopathological findings were recorded from their histopathology reports. The Ethics Committee of the National Hospital of Sri Lanka approved the study.

Results

Eighty-four patients underwent surgical treatment for fistula-in-ano during this period. Histopathological assessment of all the fistula tracts was carried out during each procedure. There were 73 (87%) male- and 11 (13%) female patients. The mean age was 39.4 years (range 11–68). Of the 84 patients, 41 (49%) had recurrent fistulae.

No significant histopathological change other than a fistula tract was present in 74 (88.1%) patients. Six (7.1%) patients had granulomatous changes on histology, and exclusion of Crohn's disease and TB as an aetiology was suggested. Three (3.6%) had foreign body type reactions. Noncaseating granulomata and microabscess formation was noted in one (1.2%) patient.

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Of the six patients where granulomatous changes were found on histology, stains for acid-fast bacilli confirmed TB in two (2.4%) patients and colonoscopy and biopsy revealed Crohn's disease in one (1.2%) patient. Both patients with TB did not have a past history of TB or physical signs suggestive of pulmonary TB. The chest X-rays did not reveal any abnormality and the Mantoux tests were normal but, the ESR was marginally elevated. Both HIV and Venereal Disease Research Laboratory (VDRL) testing were carried out and were negative. The patient with Crohn's disease had suffered recurrent episodes of abdominal pain and loose stools with passage of blood and mucus occasionally. Subsequently he had developed the fistula. All these three patients presented with recurrent fistulae.

Discussion and conclusions

Routine histopathological analysis of resection specimens is an ancient practice [7] that is still carried out in some centres worldwide. Although studies have shown that routine analysis of certain resected surgical specimens such as hernia sacs and 'doughnuts' following rectal surgery do not yield further useful information [8], analysis of all appendectomy specimens has been recommended by some authors [9].

Surgical treatment for fistula-in-ano dates back to many centuries [10]. Surgery carries a risk of damaging the anal sphincter complex and anal incontinence rates as high as 63% have been reported following surgery for fistula-in-ano [2–5]. Most of the perianal fistulae encountered in routine surgical practice are simple uncomplicated fistulae, which respond well to surgical treatment. Recurrent fistulae-in-ano, on the other hand, are difficult to manage, and certain diseases like TB, Crohn's disease, actinomycosis, chlamydia and HIV may initially present as recurrent fistulae-in-ano with minimum response to surgical treatment alone.

Globally, TB is on the rise because of the increasing number of patients diagnosed with acquired immunodeficiency syndrome (AIDS) and also because of migration to the West from high prevalence countries. In an Indian study involving 122 cases of fistulae in-ano, 15.6% were of tuberculous in origin [6]. On the other hand, a study conducted in Helsinki indicated that 0.2% of all the fistulae were because of TB [1]. In our study two (2.4%) patients had fistulae-in-ano because of TB. Anorectal TB usually coexists with the pulmonary form of the disease [11] but, anorectal disease without evidence of pulmonary infection has also been reported [12]. Both the patients in our study did not show any evidence of pulmonary TB indicating that TB could occur in isolation only in the fistula tract.

Anorectal fistula is a common manifestation of Crohn's disease. The development of fistulae may precede or coexist with the diagnosis of Crohn's disease, and up to 5% of patients will present with perianal fistulae without any other evidence of Crohn's disease [13–16]. A Western study involving 458 patients with anal fistulae had 1.3% because of Crohn's disease [1]. In our series of 84 patients, there was one (1.2%) because of Crohn's disease. Although previously regarded as a disease confined to the West, Crohn's disease is reported to be on the rise in many Asian countries [17].

Malignant transformation of a recurrent anal fistula is a rare entity and it has been reported in fistulae, which persist for more than 10 years [18,19]. Therefore some authors have suggested pathological evaluation of tissue from chronic anal fistula tracts [20]. In our study we did not come across such patients.

In our study, out of 84 patients, there were only three (3.6%) patients in whom an underlying disease was found, and all these patients had recurrent fistulae. Therefore, we do not recommend routine histopathological analysis in all the patients presenting with fistula in-ano. However, histological evaluation is mandatory in those presenting with recurrent fistulae and also those with clinical features suggestive of an underlying disease such as TB, HIV or Crohn's disease.

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