

Actinomycosis, A Rare Cause of Perianal Fistula

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ABSTRACT

Perianal fistula (fistula-in-ano) is one of the most common anorectal diseases. It is an abnormal connection between the anal canal and the perianal skin and is lined with granulation tissue. Although benign, the condition can cause significant distress and embarrassment to the patient. Major causes of an anal fistula are clogged anal glands forming anal abscesses. Other, much less common, conditions are infections, trauma and tumors. The treatment of an anal fistula depends on the etiology and location of the fistula. Most fistulas are treated surgically, through a variety of different procedures. Actinomycosis which is a gram positive bacteria can rarely cause perianal fistulas which is difficult to diagnose clinically so can result in mismanagement and recurrences leading to repeated surgeries.

Key words: Actinomycosis, Fistula in ano, Gram positive bacteria.

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Introduction

A fistula is generally defined as a pathological communication between the two epithelialized surfaces.¹ Perianal fistula is one of the common colorectal diseases with an incidence rate between 1.1 and 2.2 per 10,000 persons per year.² The main cause of perianal fistula development is sepsis originating from the crypt glands. Other etiologies include Crohn's disease (CD), chronic fissures, malignancies, radiation, trauma or foreign bodies.³ Fistulectomy is a gold standard treatment of perianal fistulas.⁴ Perianal fistulas are rarely caused by a gram positive actinomyces. Because of low index of suspicion its diagnosis is usually missed by the clinicians and proper treatment is delayed.⁵ We report a case of 38 years old male who presented in a clinic with history of recurrent fistula in ano. Previous fistulectomies were not followed by histopathological examination so tissue was sent to exclude any granulomatous disease or malignancy.

Case Report

A 38 years old male patient presented in a clinic with recurrent fistula in ano. His fistulectomy was done and we received the specimen in formalin filled container. It consisted of single irregular soft tissue fragment, brown in colour and measuring 1x1cm. The specimen was entirely submitted in one cassette.

On microscopic examination it showed colonies of actinomyces surrounded by inflammatory cells. No evidence of malignancy was seen. Gram stain highlighted gram positive filaments of actinomyces.

Discussion

Fistula in ano is a debilitating disease which is defined as a tract formed between two epithelial lined surfaces and itself lined by granulation tissue. Mostly it occurs as a consequence of infectious process in the perianal glands with budding off into

the surrounding tissue. Mostly males above 40 years are affected with an incidence range of 0.7 to 35%.⁶ Recurrence rate is high after treatment and is defined as formation of the fistula within one year after the surgical treatment when the wound is completely healed. If the fistula appears after one year, then it is considered as de Novo fistula formation. The causes are usually divided into preoperative, operative and post operative. Thorough assessment is required to avoid reurrences.⁷ Actinomycoses infection is one of the important but rare cause of perianal fistulas which is usually underdiagnosed.

Actinomyces is a nonmotile, obligate, filamentous, anaerobic bacteria which is Gram-positive. They are part of normal flora of genitourinary tract, and skin and are facultatively pathogenic. They invade breached or necrotic tissue and proliferate and start pathogenesis.⁸ Diagnosis depends upon patient's clinical history, radiological studies, microbiological cultures and histopathological examination.⁹ Treatment of actinomycetes is both medical and surgical, depending on the lesion. Penicillin in high doses is the drug of choice with ceftriaxone or

amoxicillin as alternatives. The duration of medical therapy is usually extended from weeks to months depending on the severity of the disease.¹⁰ Sulfa drugs such as sulfamethoxazole are added to penicillin in non-responsive cases to penicillin. Surgical intervention depends upon the site, severity and extent, and location of the lesion. It is done mainly to reduce the bulk of the disease and necessary in case of bone involvement, abscess and fistula formation.¹¹

Although actinomyces infection is rare but its important to keep this entity in mind because it is clinically confused with either carcinogenic process or some other etiologies thus leading to unnecessary surgical procedures and thus recurrences as its main treatment is extended systemic antibiotic therapy.¹²

Conclusion

Actinomycosis can rarely cause perianal fistulas. It is difficult to diagnose clinically, resulting in mismanagement and recurrence, and thus repeated surgeries.

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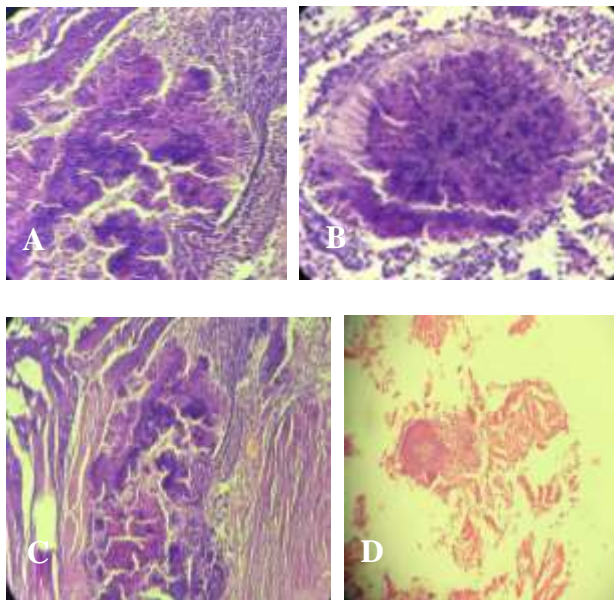


Figure 1: Fibromuscular tissue showing colonies of actinomycosis H&E X10; B: Single colony of actinomycosis showing filaments of actinomycosis; C: Fistulectomy tract lined by granulation tissue and colonies of actinomycosis; D: Gram stain highlighting the filaments of gram positive actinomycosis.

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