ANAL FISSURE (FISSURE IN ANO) **MEDICAL APPENDIX**

DEFINITION

1. An **anal fissure** is an elongated ulcer or split in the long axis of the lower anal canal - it occurs in the area of squamous epithelium, the *anoderm* which includes the external anal margin.

CLINICAL MANIFESTATIONS

2. Anal fissures usually occur in the mid-line as a result of the local anatomy and mechanics of the anus. About 90% of fissures occur posteriorly and most others anteriorly, with less than 1% of patients having fissures in both positions. Anal fissures may be acute or chronic.

3. An acute anal fissure is a deep tear in the epithelium of the anal margin extending into the anal canal. There is accompanying spasm of the anal sphincter, but little inflammatory induration or oedema.

4. A chronic anal fissure is an elongated ulcer with inflamed, indurated margins, often with a tag of oedematous skin inferiorly - a sentinel pile ("sentinel" because it guards the fissure).

5. Pain provoked by defaecation is the prime symptom. It is sharp, agonizing, tearing in character and lasting an hour or more. Pain is associated with spasm of the anal sphincter and both may persist for several hours. Minor fresh bleeding and a slight discharge may also be present. Periods of remission for days or weeks may occur. Patients tend to become constipated rather than suffer the agony of defaecation.

6. Possible complications include infection, abscess formation, and subcutaneous fistula in ano.

AETIOLOGY

7. The causes of anal fissure are not fully understood. It is commonest in young adulthood to mid-life and is more common in females. It is not rare in children and may even occur in infancy, but is uncommon in the elderly because of relative muscular atony.

8. Local trauma due to the expulsion of a hard faecal or scybalous mass as a result of constipation may stretch the anal mucosa, initiating a tear. Prolonged diarrhoea can also have the same effect. The posterior wall of the lower anal canal is the most common site, very probably because it is subjected to greater pressure and stretching by a hard faecal mass. This, together with its lower vascularity, tends to render it ischaemic.

9. Anterior anal fissure is much more common in females, especially those who have borne children, childbirth leading to a damaged pelvic floor and subsequent lack of support of the anal mucous membrane.

10. Incorrect surgical technique in haemorrhoidectomy in which too much skin is removed may result in anal stenosis and tearing of the scar, particularly when a hard motion is subsequently passed.

11. Inflammatory bowel disease such as Crohn's disease or ulcerative colitis, anal tuberculosis or syphilis may lead to fissures which are usually chronic and often in atypical sites. Over 50% of patients with Crohn's have anal lesions.

12. In its earliest stages, anal carcinoma may simulate a fissure.

CONCLUSION

13. Anal fissure is a painful tearing or ulceration of the anal passage or margin resulting from various causes including trauma to the epithelium and certain chronic inflammatory diseases.

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