Appendix abscess in a femoral hernial sac – case report and review of the literature

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Summary

The case of an appendix abscess situated in a right-sided femoral hernial sac is reported. The aetiology, diagnosis and treatment of this rare condition are discussed.

Introduction

The vermiform appendix is rarely found within a femoral hernia. In a review of 655 personal cases operated upon by Wakeley and reported in 1974, the appendix was found as a content of the hernial sac in only 6 cases, an incidence of less than 1%. Occasionally the appendix is acutely inflamed. The overall incidence of acute appendicitis occurring in various hernial sacs is claimed to be 0.13% of all cases of acute appendicitis (Ryan, 1937). However, to date only 62 cases of acute appendicitis occurring in a femoral hernia have been reported in English language publications. In 8 of these cases suppuration had occurred secondary to a localized perforation of the appendix. A further case is now reported and the features of this condition discussed.

Case report

A 72-year-old female presented with a 6-week history of a painful swelling in the right groin. During the week before presentation the swelling had increased considerably in size and had become reddened. The patient had otherwise been completely asymptomatic. General examination at this time was unremarkable, the patient being afebrile and having no tachycardia. A tender indurated area was noted in the right groin in the region of the pubic tubercle. No cough impulse was detected. However, there was associated erythema which extended medially to the right labium majus.

Local heat was applied to the affected area and by the fifth day the localized abscess which had formed was draining spontaneously. Culture of the pus revealed a mixed growth of β -haemolytic streptococci, *Escherichia coli* and *Bacteroides* sp. Purulent discharge continued for 9 days, after which the area healed satisfactorily.

Three months later, however, an indurated nodule 2.0×1.5 cm was still present below and lateral to the pubic tubercle. It was immediately below the skin and attached to it. It was non-tender and had no cough impulse. General examination was again unremarkable except that the patient now had 2% glycosuria. A full blood count was within normal limits and a random blood sugar 14 mmol/l.

The right femoral canal was explored under local anaesthetic. A femoral hernial sac was identified and was found to contain a fibrosed appendix. Routine appendicectomy was performed and the femoral ring repaired from below. The patient made an uneventful postoperative recovery. Histology of appendix revealed evidence of recent acute inflammation and the presence of a metaplastic polyp.

Discussion

Two main possibilities exist as regards the aetiology of the condition. Inflammation of the appendix may arise as a primary event or may be secondary to constriction of the viscus by the neck of the hernial sac. Some case reports such as those of McDowell *et al.* (1978) firmly point to the latter as an important cause. Once the appendix becomes inflamed the narrow neck of the femoral hernial sac seems to aid localization of the infection and thus prevent generalized peritonitis. A localized appendix abscess in a femoral hernial sac is therefore clearly distinguishable from those cases reported by Cronin and Ellis (1959) in which a purulent collection occurred in a hernial sac secondary to generalized peritonitis.

The age and sex incidence of acute appendicitis with or without abscess formation occurring in femoral hernial sacs tends to follow that of uncomplicated femoral herniae and hence the condition is most frequently seen in post-menopausal women (Voitk, Macfarlane and Estrada, 1974). A correct pre-operative diagnosis was not made in this case and to date only one author has been accredited with this distinction (Voitk *et al.*, 1974).

Once an appendix abscess has formed in a femoral

hernial sac it should be drained and interval appendectomy with herniorrhaphy carried out at a later date.

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