

CASE REPORT

Superficial Femoral Artery Mycotic Aneurysm Following Appendicectomy

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Introduction

It was Sir William Osler in his 1885 Golstonian lecture who coined the term mycotic aneurysm associating abnormal heart valves and infection with micrococci. In recent times inadvertent intra-arterial injection of drugs by abusers is rapidly becoming a common cause of peripheral mycotic aneurysms.¹ Such aneurysms threaten not only the limb but also carry a high mortality from spontaneous rupture.

Complex vascular complications of acute appendicitis are rare. Although sepsis of a pre-existing aortic aneurysm has been described,² the authors are unaware of any report of a mycotic aneurysm involving a previously normal artery from a bacteraemia secondary to acute appendicitis.

Case Report

A previously fit 19-year-old male underwent appendicectomy for acute appendicitis. At surgery an inflamed retrocaecal was noted with no sign of perforation. No prophylactic antibiotic cover was given for the procedure. On the 5th postoperative day he noticed an expanding right thigh swelling. There was no history of trauma. At the time of referral to the University Surgical unit, a tender 8 × 6 cm superficial artery aneurysm in the mid-thigh was noted. Although popliteal and distal pulses were not palpable, he had no sign of acute distal ischaemia. Routine investigations revealed a haemoglobin of 9 gm/dl, platelet

count of 100 000, WCC of 17 500 and blood culture was positive for *E. coli*.

Before it was possible to obtain an angiogram, he developed sudden increase in the size of the swelling with severe rest pain and paraesthesia along the distribution of the saphenous nerve. He was haemodynamically stable but dropped his haemoglobin and this necessitated blood transfusion. At emergency surgery a contained rupture of a superficial femoral artery aneurysm was noted extending from the mid-thigh to the adductor hiatus. The large aneurysmal sac contained necrotic material mixed with blood clot, completely occluding any possible lumen and accounting for the absence of any distal palpable pulse. The aneurysm was resected and he had a reversed vein femoropopliteal bypass graft.

Histology confirmed an aneurysmal wall with extensive necrosis, inflammatory cells and the presence of bacterial colonies in keeping with *E. coli* infection. There was no postoperative complication and he was well enough to be discharged home on day 7. He remains well a year later.

Discussion

Femoral artery aneurysms have, until recently, been often secondary to arteriosclerosis. In recent years an increasing number of mycotic aneurysms of the femoral artery have been observed following intra-arterial drug abuse and trauma.¹ Although in such cases the source of infection is usually exogenous, bacteraemia from any source has the potential to cause transluminal vessel necrosis and subsequent aneurysmal formation even in a normal artery.³ In developing countries where prophylactic antibiotic

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therapy is not widely practised, bacteraemia which can occur in simple procedures such as appendectomy, may result in distant complex problems. It is known that mycotic aneurysms tend to enlarge rapidly and rupture, as in the case presented here. Surgical management must include resection, debridement and bypass in most cases, preferably avoiding the use of prosthetic material.^{4,5}

Although appendectomy is a common surgical procedure, we, through this case report, believe that the use of prophylactic antibiotic therapy not only decreases the incidence of local septic complications, but also complex distant vascular problems which occasionally may arise.

References

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