Tuberculous Pseudoaneurysm of the Superficial Femoral Artery:
A Case Report and Literature Review

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Introduction
Tuberculous pseudoaneurysm is a rare and often fatal condition. Only 41 cases of aortic aneurysm and seven cases of femoral aneurysm treated surgically appear in the literature1,2 up until 1999. We report a case of tuberculous pseudoaneurysm of the superficial femoral artery that was successfully treated with resection, reversed saphenous vein graft interposition, and postoperative antituberculous chemotherapy.

Case Report
A 73-year-old man was admitted with a pyrexia of unknown origin and a 2 month history of a pulsatile mass in the right upper thigh. The pulsating mass had developed after an episode of fever and rigors lasting several days. He was a heavy smoker; 30 a day for 50 years. On examination the patient was febrile but hemodynamically stable. The initial blood pressure was 150/80 mmHg, pulse rate 70/min, respiratory rate 20/min and body temperature 37.7°C. An hen egg sized tender pulsatile mass was found in the medial side of the right upper thigh. The distal pulses in the right leg were normal. The initial leukocyte number was 6500/ul (lymphocytes 20%, monocytes 14%), ESR 51 mm/h, C-reactive protein quantity 1.95 mg/dl. On CT angiography, there was a pseudoaneurysm of the right superficial femoral artery with a wide gap in the arterial wall (Fig. 1). The spiral chest CT scan revealed randomly distributed tiny nodules in both lungs compatible with miliary tuberculosis. Anti-tuberculosis medication was started with isoniazid, rifampicin, ethambutol and pyrazinamide and after ten days surgery was carried out. The distal and proximal right superficial femoral artery was controlled and the pseudoaneurysmal sac was opened. The arterial wall was destroyed over a length of 1.5 cm (Fig. 1). The thrombotic tissues within the pseudoaneurysm were removed. A reversed saphenous vein graft was used to replace the resected artery with end-to-end anastomoses (Fig. 1). A closed suction drain was inserted.

The postoperative course was uneventful. Pathological examination of the surgical specimens revealed caseating granulomata with acid and alcohol fast bacilli were found in the arterial wall together with disruption of the elastic lamina revealed by elastic staining (Fig. 2). He was discharged 2 weeks after the operation.

Discussion
In 1999, Kao et al.² summarized seven cases of surgically treated patients with tuberculous femoral aneurysm. To our knowledge, only ten cases (including our own) of surgically treated tuberculous femoral aneurysm have been reported in the literature up until 2001. The treatment of aneurysm caused by tuberculous infection comprises resection of the aneurysm,
restoration of vessel continuity, and perioperative antituberculous chemotherapy. If the resected segment is short and no gross infection is found in the operative field, direct anastomosis may be used. However, in the case of graft replacement for restoration of vessel continuity, autogenous vein graft would be recommended. Only four cases, including our own, were treated with restoration of vessel continuity in

Fig. 1. Left; CT angiogram revealed a pseudoaneurysm of the right superficial femoral artery. Middle; the defect of the arterial wall of the superficial femoral artery. Right; reversed saphenous vein graft was interposed.

Fig. 2. Left; a granuloma in the wall of the resected superficial femoral artery, showing central caseating necrosis (H&E × 100). Right; caseating granuloma, showing many acid-fast bacilli in clusters (AFB × 400).
the literature. Direct anastomosis was used by Kao et al., and prosthetic graft interposition was used by Morohoshi and reversed saphenous vein graft interposition after removal of the primary inserted stent graft was used by Lagattola. A review of previous reports found that our patient was the first case to be treated with autogenous vein interposition as a primary treatment modality.

A stent graft was considered as a temporary procedure but rejected because of the possibility of persistent infection. Perioperative antituberculous chemotherapy is mandatory for extrapulmonary tuberculosis. Short-course antituberculous chemotherapy has been proven to be useful in the treatment of extrapulmonary tuberculosis because of the small bacterial load. References