# Femoral Arterde Çoklu Mikotik Anevrizma: Olgu Sunumu

## *MULTIPLE MYCOTIC ANEURYSMS OF THE FEMORAL ARTERY: CASE REPORT*

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## Özet

Sað alt ekstremitede mevcut olan çoklu mikotik anevrizma olgusu sunulmuþtur. Kültürlerin negatif gelmesine raðmen hastadan alýnan öykü, fizik muayene ve ameliyat bölgesindeki pürülan materyalin varlýðý muhtemel mikotik anevrizma tanýsýný koydurmuþtur. Anevrizma ve perianevrizmal doku tam rezeke edilmiþ ve defektler sentetik vasküler greftler ile onarýlmýþtýr. Postoperatif antibiyotik tedavisi verilmiþ ve hasta þifa ile taburcu edilmiþtir.

***Anahtar kelimeler:*** Mikotik anevrizma, femoral arter, damar cerrahisi, vasküler greft

*Türk Göðüs Kalp Damar Cer Derg 2004;12:205-207*

## Summary

A case of multiple aneurysms of the arterial system of the right leg is described. Although cultures were negative, a presumptive diagnosis of mycotic origin was made based on the finding of purulent material at the site, and patient history and signs. The aneurysms and associated perianeurysmal tissue were removed by N-block resection, and the defects were repaired with synthetic vascular grafts. Postoperative antibiotic therapy was prescribed, and the patient made a full recovery.

***Keywords:*** Mycotic aneurysm, femoral artery, vascular surfery, vascular graft

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## Introduction

Multiple mycotic aneurysms are rare pathologies. Surgical intervention in these cases is challenging because of the causative organisms involved, the timing of operation, the operative techniques that are necessary, the prosthetic materials required and appropriate adjuvant antibiotic therapy. We describe a patient with multilocular aneurysms in the arterial system of his right leg.

## Case

A 56-year-old man was referred to our department with the complaint of swelling in his right inguinal region. He had had persistent pain, hyperemia in his right foot one month ago. A week of non-specific antibiotic therapy had provided pain relief but the leg had remained swollen. There was nothing otherwise remarkable in his medical history such as bacteriemic attacks or infective endocarditis. He reported having a single sudden fainting spell. This had been evaluated by electroencephalography, but no abnormalities were found. The patient also complained of generalized pruritus. Testing of his carcinoembryonic antigen level showed that this was slightly elevated.

Physical examination revealed an approximately 30x40 mm mass in the patient's right inguinal region. The protrusion was painless, pulsatile but without a thrill, and there was no hyperemia or hyperthermia in the region. The exam revealed no other abnormalities of the arterial system. Color doppler ultrasonography of the arterial system of the patient's right leg revealed an aneurysmal dilatation protruding from the superficial femoral artery. According to the findings on the scan, the sac measured 15x18 mm at the level of the adductor channel. At this site, we noted turbulent blood flow and the caliber of the vessel was increased (8 mm). There was triphasic flow proximal to the lesion, and low-rated triphasic flow distal to the sac. The popliteal and crural arteries appeared normal.

Based on these findings, the patient underwent aortofemoropopliteal angiography. This revealed an aneurysmal dilatation that originated from the right common femoral artery and extended towards the superficial femoral artery. This sac included the origin of the deep femoral artery, and measured 24.9 x 46.7 mm in size. We also noted a second aneurysmal sac at the exit from Hunter's channel, this one measuring 11x10 mm in size (Figures 1 and 2).

The patient was operated on under epidural anesthesia. Upon dissecting the first aneurysm we noted a purulent collection surrounding the lesion. We resected the 50x40 mm sac, and interposed a 7 mm PTFE graft between the common femoral artery and the superficial femoral artery. Then we anastomosed the deep femoral artery to the graft in end-to-side fashion. The second aneurysm turned out to be approximately 30x20 mm in size. We resected it from the lower part of the superficial femoral artery, and then interposed another 7 mm PTFE graft

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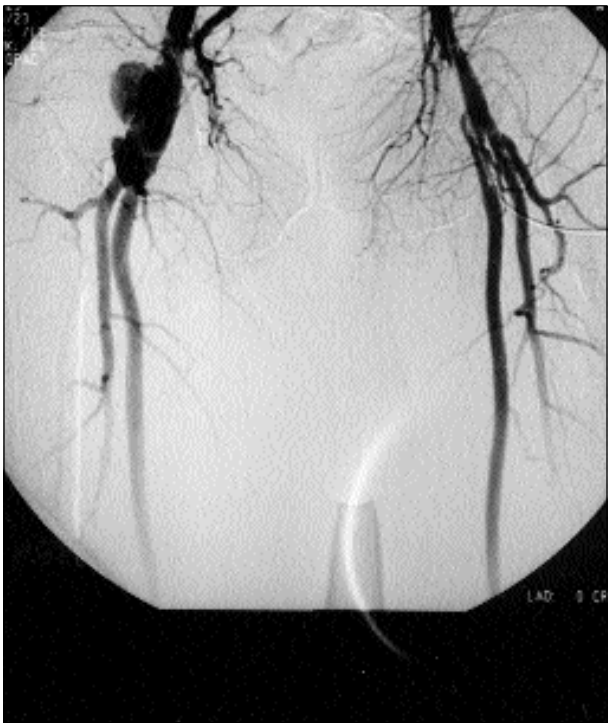

**Figure 1.** First aneurysmal dilatation on the right common femoral artery extending towards the superficial femoral artery.

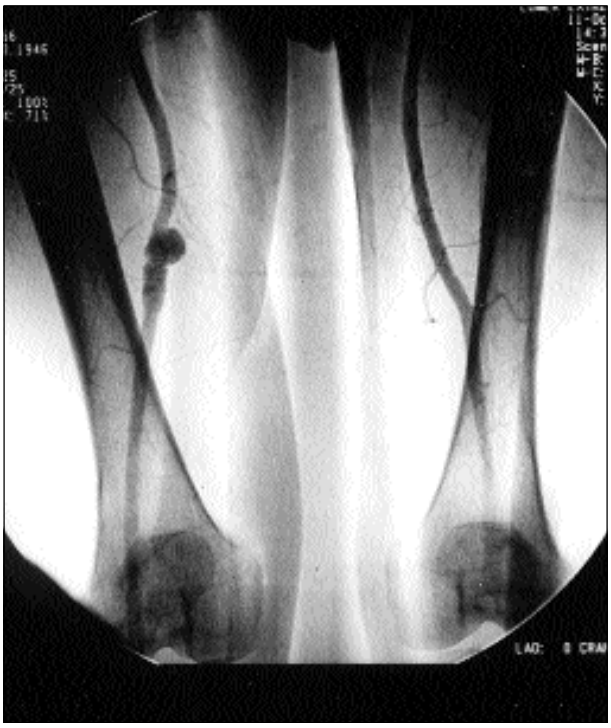

**Figure 2.** Second aneurysmal sac at the exit of Hunter's channel.

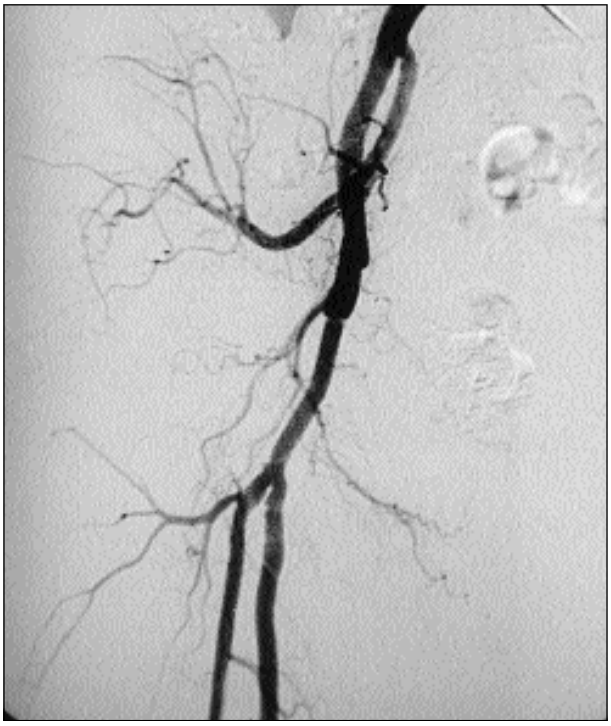

**Figure 3.** Patent graft between common femoral artery and superficial femoral artery. Notice that the patent deep femoral artery arising from the graft.

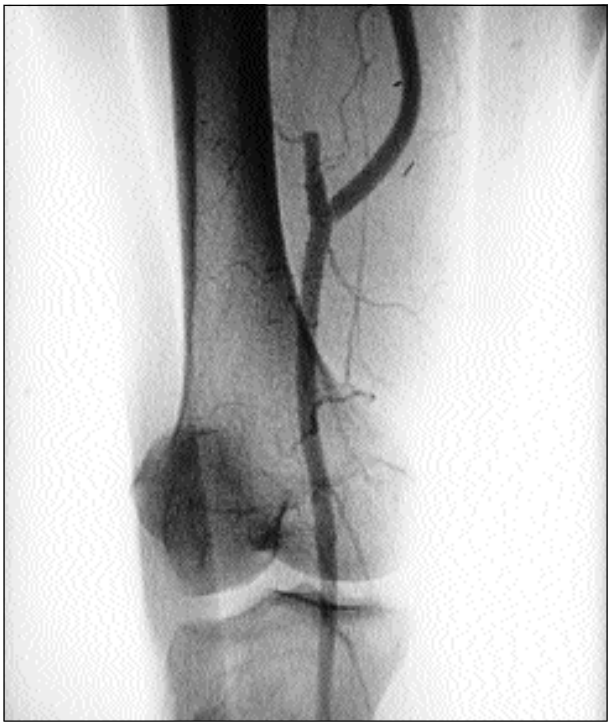

**Figure 4.** Patent graft on the distal superficial femoral artery.

between the superficial femoral artery and the popliteal artery. The aneurysms were removed by N-block resection, including perianeurysmal tissue. The patient was prescribed a 1-week course of wide-spectrum non-specific intravenous antibiotics postoperatively ( Cefamezin, 3x1 gr i.v.).

Postoperative aortofemoropopliteal angiography revealed that the femoral artery was patent at both grafting sites (Figures 3 and 4). Microbiological direct examination and cultures of the material from the resected arterial wall were all negative. Pathological examination of the aneurysmal segment showed that the lesion was a thrombotic aneurysm. Also ocular examination, rheumatologic testing, and laboratory results ruled out Behçet's disease.

## Discussion

The clinical findings in the early stages of mycotic aneurysm are generally non-specific [1]. Most patients have fever of unknown origin, and blood cultures are positive in only 50%-70% of cases. In our case, although we were unable to isolate a specific microorganism, the patient's history, clinical findings, and the observation of a purulent collection in the surgical field suggested that the lesions were likely mycotic. The pathological findings supported this presumptive diagnosis. Other vasculitic diseases, such as syphilis and Behçet's disease were ruled out on the basis of the patient's clinical symptoms, physical findings, and pathological results [1,2].

The optimal treatment for mycotic aneurysm, including questions of surgical timing and technique, appropriate adjuvant antibiotic therapy and duration, among others, remains controversial [3,4]. Vascular alteration, especially changes in the media due to infection or other causes, may lead to rupture; thus, surgical treatment is strongly advocated [5]. Generally, the recommended plan is surgical treatment after adequate antibiotic therapy [5].

Antibiotic treatment was effective in our patient. We were unable to detect any pathological findings that definitively identified the infection either preoperatively or postoperatively; thus, we opted for broad-spectrum coverage. The optimal course of postoperative antibiotic therapy for vascular graft procedures has not been established, but it is recommended that these drugs be given for six weeks after surgery in thoracoabdominal aneurysms [6].

Our patient had multiple aneurysms of the femoral artery that were presumed to be mycotic. The case was interesting in that these lesions are unusual, and because N-block resection, PTFE grafting, and a one-week postoperative course of wide-spectrum antibiotic therapy resulted in complete cure.

## References

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