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IS ENDOVASCULAR INTERVENTION FIRST CHOICE TO A LONG COURSE FEMOROPOPLITEAL ANEURYSM? A DISCUSSION BASED ON A UNCOMPLICATED MANAGEMENT OF ANEURYSM

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ABSTRACT

Background: Aneurysmal dilatations of superficial femoral artery (SFA) have been rarely reported. The natural history of untreated SFA aneurysms comprised of rupture, thrombosis, embolism. Treatment options are surgery and endovascular intervention. **Case**: Herein we wanted to present a case with a long aneurysm in SFA and popliteal artery who was seen with distal emboli into right toe within 2 weeks. After doppler ultrasound examination we performed diagnostic angiography and found a long course aneurysm which was extending from middle-third of the femoral artery to distal part popliteal artery, also there was another aneurysm in contralateral hip. The endovascular management was chosen for the first approach (Picture1-2), with satisfactory final result. **Conclusions**: Our experience indicates that most of the uncomplicated peripheral arterial aneurysms should be managed with endovascular approach.

Keywords: Popliteal artery aneursym, endovascular intervention, graft stent

INTRODUCTION

Aneurysmal dilatations of superficial femoral artery (SFA) have been rarely reported. The ethiology of true aneurysms of the SFA are atherosclerosis, mycotic infection, non-infectious autoimmune or inflammatory arteritis and connective tissue disorders and the prognosis for this type of aneurysm following surgical therapy is good. Amputation rate is reportedly low [(1)]. SFA aneurysms that can be presented together with aneurysms in the aortic arch, the abdominal aorta, the common femoral artery, the popliteal artery, or aneurysms occurring bilaterally should be suspected to be the result of systemic vascular diseases. The natural history of untreated SFA aneurysms has not been clearly demonstrated. Studies of aneurysms of the SFA have shown a rupture rate of 35% to 48%, a thrombosis rate of 13% to

18%, an embolism rate of 9% to 12%, and limb salvage in 94% of cases [2]. There is no Level A evidence in most cases to determine the choice of treatment between open or endovascular intervention. The choice of operative approach will ultimately be determined on an individual basis, dependens on the patient risk factors, and aneurysm anatomy [3].

Case:

Herein we wanted to present a case with a long aneurysm in SFA and popliteal artery. A 72-age gentleman was seen with distal emboli into right toe within 2 weeks. He had had a CABG operation and EVAR procedure for abdominal aortic aneurysm before. After doppler ultrasound examination we performed diagnostic angiography and found a long course aneurysm which was extending from middle-third of the femoral artery to distal part popliteal artery, also there was another aneurysm in contralateral hip. The endovascular management was chosen for the first approach (Picture 1-2). We placed multiple nitinol–polytetrafluoroethylene self-expanding stent-grafts, after final post-dilatation the final result was satisfactory.

DISCUSSION

Although aneurysmal dilatations of superficial femoral artery (SFA) have been rarely reported, the risk of rupture is greater than that found in peripheral aneurysms. This, in association with the possibility of the creation of thrombosis or embolization, threatens the extremity itself as well as the life of the patient, increasing the risk of complications and even death [1]. The SFA is located in the deep structures of the thigh, and is not easily detected until the size is large enough for palpation or the symptoms are apparent. Ultrasound is a noninvasive first line of investigation for aneurysms. CT is an accurate and effective diagnostic tool for defining the size, configuration, internal nature of the aneurysm, and the condition of adjacent vessels other than the SFA. Despite there being insufficient data on the indication for surgical intervention, aneurysms of the SFA greater than 2.5 cm should be repaired surgically. Endovascular repair is currently an alternative technique. Operative approaches should take into account the general conditions of the patient, the presence of complications, and the size and configuration of the aneurysm or aneurysms [2]. After consideration, some aneurysms (femoral, subclavian, carotid and ECAA) fare better with an open first approach; renal, splenic and some visceral artery aneurysms do better with an endovascular first approach. In our practice popliteal artery aneurysms are treated with an endovascular first approach [3]. Some authors advocate to the endovascular approach is a minimally invasive procedure which should be proposed as the first-line treatment to all the patients presenting aneurysms of the superficial femoral arteries, both asymptomatic or complicated [4].

CONCLUSIONS

Our experience indicates that most of the uncomplicated peripheral arterial aneurysms should be managed with endovascular approach.

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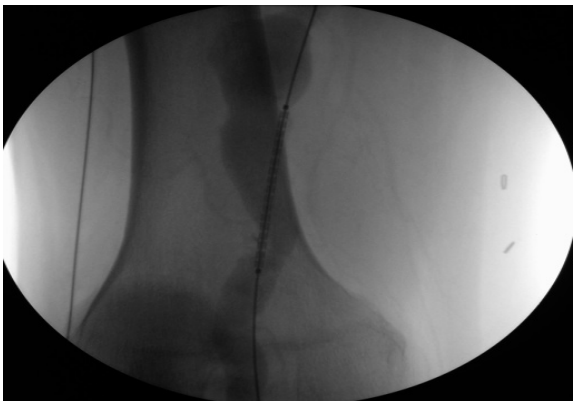
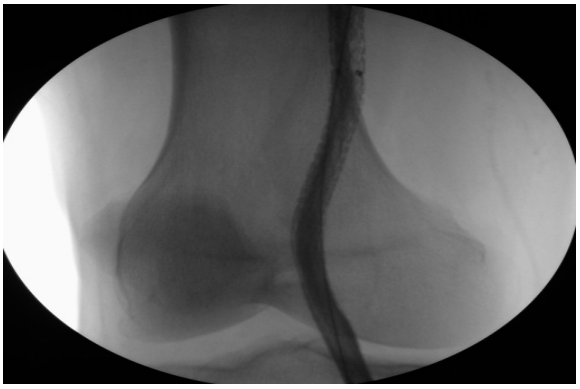


Picture 1: A superficial femoral artery aneurysm which is extending into popliteal artery and while implanting a graft stent.



Picture 2: Final satisfactory result.