



A CASE REPORT OF ENDOVASCULAR TREATMENT OF A TRAUMATIC PSEUDOANEURYSM OF SUPERIOR GLUTEAL ARTERY

General Surgery

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ABSTRACT

Aneurysms of the gluteal arteries are very rare with the majority being post-trauma pseudoaneurysms. Generally, management of these aneurysms could be surgical or through endovascular techniques. We present a case of a Post Traumatic Pseudoaneurysm of Right superior gluteal artery that presented as Hypovolemic shock. It was successfully treated by transcatheter coil embolization. We review the presentation, imaging, and treatment options. Aneurysms have to be considered in the differential diagnosis of soft tissue masses, therefore lesion intervention by aspiration or needle biopsy should not be tried before ruling out a possible vascular nature which will easily be revealed by ultrasound Doppler or computed tomography scans.

KEYWORDS

Aneurysm, artery, gluteal, literature, review, superior

INTRODUCTION :

Case Report : A 24- year-Old Male Presented with a History of fall down from a tree on an axe while cutting a tree. Following trauma he had torrential bleeding from 15*3*14 Cms Sized Horizontally placed Incised wound over Superomedial aspect of right buttock. Primary Treatment , Resuscitation with primary packing of wound done at nearby Hospital & referred to our care for further management. On Exploration under anaesthesia 14 Cms deep incised wound found with Right gluteus muscles appeared cut in two halves. No definite bleeder found. Two halves of Muscles apposed with each other with absorbable sutures with figure 8 Sutures. Patient had been discharged on 4th Postoperative day .

On 12th Postoperative day Patient presented with C/o Bleeding from wound. Resuscitation with re-exploration of Wound done under Anaesthesia shows wide gapping of wound with Multiple blood clots in wound, Large visible pulsatile structure seen in floor of wound - a Pseudoaneurysm of Peripheral blood Vessel Suspected[Figure 1]. Pelvic CT angiography Shows Pseudoaneurysm of Right Superior Gluteal artery. Patient was referred for endovascular treatment. After all aseptic measures the Right femoral artery was punctured with a 18 G needle, followed by placement of a vascular access sheath, A 5 Fr catheter was introduced over the guide wire through sheath into right internal iliac artery. Contrast run revealed that the right superior gluteal branch was hypertrophied and was seen to end into a large pseudoaneurysm measuring 10.6 * 8.7 cm. Nester Embolization coil (Cook Medical) measuring 5mm* 5cm deployed by progreat catheter (Terumo Ltd) at distal end (the origin of aneurysm) of superior gluteal artery. Complete embolization was achieved with exclusion of pseudoaneurysm.[Figure 2]

Patient was discharged third Post-op day. He had an uneventful recovery with resumption of daily activities. The patient had regular follow-ups and was asymptomatic, had no erectile dysfunction and other complaints.

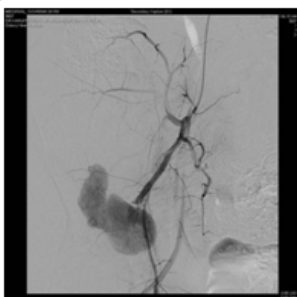


Figure 1. showing Pseudoaneurysm of Right Superior Gluteal Artery



Figure 2. EndoVascular Embolisation of Pseudoaneurysm with Coils

DISCUSSION:

Aneurysms involving the superior gluteal artery are very rare. Although the exact incidence is not known, a review of the literature shows overall less than 150 reported cases and less than 40 cases since 1970. A majority were pseudoaneurysms complicating pelvic trauma caused by blunt or penetrating injuries. Other rare reported causes are iatrogenic, infection, vasculitis, and atherosclerosis. As these lesions commonly present with gluteal swelling which may be mistaken as an abscess, proper diagnosis by cross sectional studies or angiography is important to avoid disastrous events. Two treatment options available for these lesions include endovascular techniques and open surgery. Generally, there are two options for managing these cases; open surgery and endovascular therapy. Open surgery was the standard treatment for many years. For aneurysms that are very large or involving the part of gluteal artery proximal to the sciatic foramen there is a need to control the iliac artery by a transperitoneal approach, while an entirely extrapelvic aneurysm can be managed by posterior buttock approach.

Surgery is effective in treating the aneurysm and removing thrombus to decrease pressure symptoms; but it has a number of drawbacks; it is difficult and more invasive than endovascular treatment with a risk of iatrogenic injuries and infection.[3,6]

Endovascular therapy, typically with coil embolization has been suggested over the last two decades as an alternative to surgical repair.[1,3,7] Although no major complications were encountered, literature reported few cases of coil dislodgement and migration. This can be reduced by the use of the newer longer and more pliable coils. In general, as endovascular therapy is less invasive, it can be the first line of treatment, with open surgery can be used for cases in which this method fails to repair the aneurysm or control the compressive symptoms.[5]

In addition to embolization, endovascular therapy using stent grafting

as well as direct thrombin injection has been suggested by some authors as a treatment option.[2,6]

Thrombin injection is routinely practiced in the treatment of femoral artery pseudoaneurysms complicating catheterization. Thrombin injection was found more successful in acute superficial aneurysms with narrow necks. In the current case, we preferred endovascular embolization over thrombin injection as the aneurysm was chronic and large in size, which might have required larger amount of thrombin. In rare cases, thrombin reflux into the circulation with undesired serious thrombosis has been reported. Moreover, the surrounding hematoma rendered this aneurysm deep and difficult to access. Authors thought that endovascular embolization to be a more effective method in achieving complete thrombosis of this lesion where all collateral vessels and branches could be treated selectively.

CONCLUSION

In spite of being rare, gluteal arteries aneurysms should be considered in the work-up of a patient with an acutely expanding gluteal mass or sciatic pain following trauma or medical procedures. CT, US, and MRI play a useful role in early diagnosis of these lesions and allow prompt treatment. Endovascular techniques are a safe and effective alternative to surgical repair.

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