

# Research Journal of Pharmaceutical, Biological and Chemical Sciences

## Pseudoaneurysm of Anterior Tibial Artery Following Penetrating Injury.

A Raghavendran\*, P Sureshbabu, KS Ravishankar, and P Sasikumar.

Department of General Surgery, Sree Balaji Medical College & Hospital, Bharath University, Chrompet, Chennai – 600044, Tamil Nadu, India.

### ABSTRACT

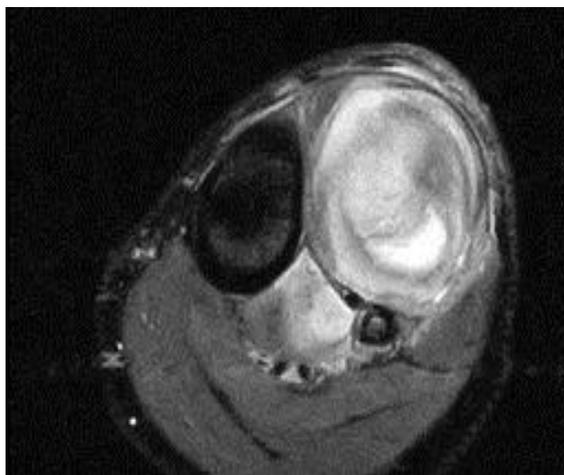
Pseudoaneurysm of the anterior tibial artery has usually felt to be iatrogenic. These lesions usually occur as a result of blunt trauma, crush injury, open or closed fracture, and also secondary to penetrating trauma. We report the case of a patient presented with swelling in the left lower limb for 1 week which was suspected to be a soft tissue tumor and later after further evaluation it was diagnosed to be pseudoaneurysm of anterior tibial artery. Ultrasound examination should be performed initially to avoid an inadvertent incision and catastrophic bleeding as might occur with an inappropriate biopsy. Preoperative and intraoperative angiograms are essential to confirm the diagnosis, delineate the site and type of injury, and help to plan the treatment.

**Keywords:** pseudoaneurysm, tibial artery, injury

*\*Corresponding author*

**CASE REPORT**

A 17 year old boy came with the complaints of swelling in the left lower limb for past 1 week after a history of penetrating injury following which he developed swelling. No h/o pain, fever, discharge. On examination 6\*5 cm in anterolateral aspect of proximal 1/3<sup>rd</sup> of left lower limb, oval in shape, surface was smooth, Bluish discoloration was present over the swelling, was firm in consistency, Transmitted pulsation present , No thrill was present, Proximal and distal pulse was felt. Routine investigations were done. Clinically it was suspected to be soft tissue sarcoma. X-ray left lower limb showed a soft tissue swelling. Patient was planned for excision biopsy, on putting a needle frank blood was aspirated and swelling refilled quickly following the aspiration. Compression bandage was applied and patient was evaluated further. MRI showed Features suggestive of pseudoaneurysm arising from the proximal aspect of anterior tibial artery with hematoma in the deep posterior compartment involving tibialis posterior muscle. After discussing with vascular surgeon ligation of anterior tibial artery and evacuation of hematoma done. Peripheral pulses were well felt postoperatively. Initially patient had neuropraxia for 2 days and patient recovered after that. Patient was discharged on post-operative day 5.



**Pseudoaneurysm of Anterior Tibial Artery**

**DISCUSSION**

The anterior tibial artery is a branch of the popliteal artery that arises at the distal border of the popliteus muscle. It passes anteriorly and lies on the interosseous membrane, which in turn is attached to the

posterolateral border of the tibia. The artery is relatively fixed here, as it just enters the anterior compartment after hooking across the proximal border of the intraosseous membrane [1].

Pseudoaneurysm is a breach in vascular wall leading to extravascular hematoma contained by surrounding tissues that freely communicates with intravascular space. They may mimic soft tissue masses including abscesses, neoplasms or ganglions [2].

Surgical correction of a false aneurysm should be performed as soon as possible after the diagnosis is made, to prevent the complications of rupture or rapid expansion with resultant pressure on the adjacent nerves[6]. Urgent surgery is advocated if neurological symptoms develop [3]. Several methods of repair have been described in the literature for the treatment of a pseudoaneurysm. These include excision of the aneurysmal sac and repair of the lateral wall,endoaneurysmorrhaphy — obliterative or reconstructive, limited arterial resection, and end-to-end anastomosis, resection, and graft placement and ligation of the artery (if non-critical). It has been suggested that pseudoaneurysm of the anterior tibial artery can be managed by ligation, provided the posterior tibial artery is patent and maintains vascularity to the anterolateral compartment and distal limb [6].

### CONCLUSION

Pseudoaneurysm following penetrating injuries can present like soft tissue tumor. Proper clinical examination and radiological evaluation helps in avoiding catastrophic bleeding. Early diagnosis of pseudoaneurysm can help in avoiding complications.

### REFERENCES

- [1] Starling S, Ellis H. Edinburgh: Churchill Livingstone; 2005. Gray's Anatomy. The Anatomical Basis of Clinical Practice.
- [2] Gantz ED, Sweet MB, Jakim I. J Bone Joint Surg (Am) 1988;70:1090–2.
- [3] Rich NM, Spencer FC. Philadelphia: WB Saunders; 1978. Vascular trauma.
- [4] Landreneau RJ, Snyder WH. Am J Surg. 1992;33:197–201.
- [5] Zitsman JL. J Pediatr Surg 1998;33:15747
- [6] Crellin RQ, Tsapogas MJ. J Bone Joint Surg (Br) 1963;45:142–4.
- [7] Ricotta JJ. False aneurysm and arteriovenous fistula. In: Cameron JL, editor. Current Surgical Therapy. 4th ed. St. Louis MO: Mosby; 1992. pp. 681–61.
- [8] Hughes CW. Ann Surg 1958;147:555–61.