

# CASE REPORT

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## A CASE REPORT - RADIAL ARTERY ANEURYSM FOLLOWING BANGLE INJURY, A RARE CASE

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**ABSTRACT:** Aneurysm of radial artery is a rare entity. When encountered is of great clinical significance because of propensity of complication. Adequate imaging is essential for the diagnosis when clinically suspected and early intervention should be advocated. We report a case of radial artery aneurysm which was successfully treated by excision of aneurysm with radial artery reconstruction by venous grafting.

**KEY WORDS:** Aneurysm, traumatic, radial artery, venous grafting.

**INTRODUCTION:** Radial artery aneurysm is an uncommon clinical occurrence. They are usually associated with trauma, usually penetrating or iatrogenic. 1. Incidents following blunt trauma have been described. 2. Both true and false aneurysms have been described following cannulation of the radial artery with a rate of 6 per 12,500 and usually associated with infection. 3. Radial artery pseudo-aneurysm following excision of a wrist ganglion has also been reported. 4. Here we present a case of traumatic radial artery aneurysm diagnosed by Doppler study and treated successfully.

**CASE SUMMARY:** A 13 yr old female patient presented with history of swelling over left forearm following bangle injury 1yr back. On examination pulsatile swelling measuring about 4\* 4 cms over left forearm 1cm above the wrist joint. Skin was shiny and all the borders well made out with smooth surface, compressible. Compression of radial artery proximally swelling is decreases in size. Wrist joint movements are normal. Doppler study shows aneurysm of the left radial artery.

**OPERATIVE PROCEDURE:** Under brachial plexus block, complete excision of the aneurysm done, gap in radial artery is reconstructed with venous graft harvested from mid forearm of same limb. (end to end anastomosis). Patient tolerated the procedure well. Post-operative recovery was uneventful.

**DISCUSSION:** Radial artery aneurysms are extremely rare. Aneurysm can be classified by cause as traumatic and non-traumatic. Non-traumatic causes are atherosclerotic, mycotic, inflammatory and idiopathic. Traumatic aneurysm may be further divided into false and true aneurysm. Aneurysms of more insidious onset have been reported in arteriosclerosis. 6. and neurofibromatosis, where vasculopathy is well recognized. 7, 8.

Radial artery aneurysms are less common than aneurysm of the ulnar artery although discrepancy is unexplained. 1. 5. Ultrasonography with a real time linear transducer at a frequency of 7.5 MHz has assisted pre-operative diagnosis. When the diagnosis is suspected, pre-operative angiography has been used for pre-operative confirmation and planning in some cases. Imaging

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plays a key part in diagnosis, and non-invasive methods like duplex Doppler and MRI may supersede arteriography. When the diagnosis is suspected, pre-operative angiography has been used for pre-operative confirmation and planning in some cases. 9.

Treatment depends on collateral circulation, but early intervention is advocated to avoid complications. Treatment includes simple ligation of the involved vessel and excision of the sac; ligating the main vessel, provided the other forearm vessel remains intact; repair of the defect directly or by vein patching or grafting 10. In our case repair of the defect was done by venous graft.

**CONCLUSION:** Though radial artery aneurysm is a rare entity clinical suspicion and diagnosis should be born in mind. Adequate imaging is essential and early intervention is needed for prevention of potential complications.

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Fig-1: Swelling of radial artery



Fig-2: Excision of Aneurysm



Fig-3: Complete Excision of Aneurysm



Fig-4: Vein graft after Excision of

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