# True Radial Artery Aneurysm in the Anatomical Snuffbox

R Hegde, P Addala, S Kumar

**Citation**

R Hegde, P Addala, S Kumar. *True Radial Artery Aneurysm in the Anatomical Snuffbox*. The Internet Journal of Surgery. 2007 Volume 17 Number 1.

**Abstract**

True radial artery aneurysms are extremely uncommon and those of the distal radial artery are even rarer than those of the proximal radial artery. A review of the literature revealed one case of a true radial artery aneurysm in the anatomical snuffbox and another one distal to the anatomical snuffbox. Those described in literature are usually false aneurysms secondary to direct trauma or iatrogenic. Of a few radial artery aneurysms reported, for some an idiopathic etiology is described and others are atherosclerotic. Here we report an unusual case of a true radial artery aneurysm with idiopathic etiology.

## CASE REPORT

A 55-year-old female presented with a small, tender, pulsatile, 3 x 2cm swelling in the left anatomical snuffbox of one year duration and no history suggestive of traumatic or iatrogenic cause (Figure 1A). Allen's test was positive on examination.

**Figure 1**

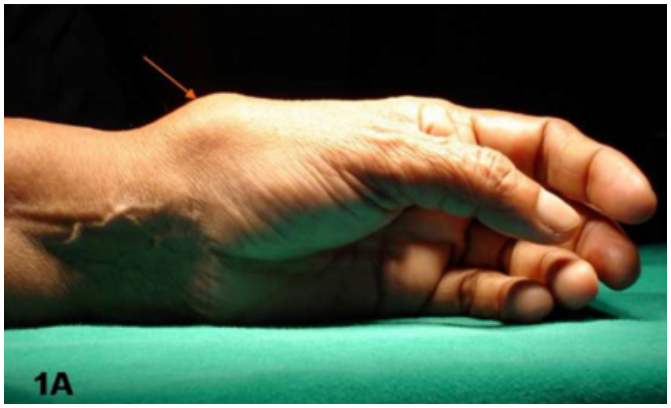



**Figure 2**

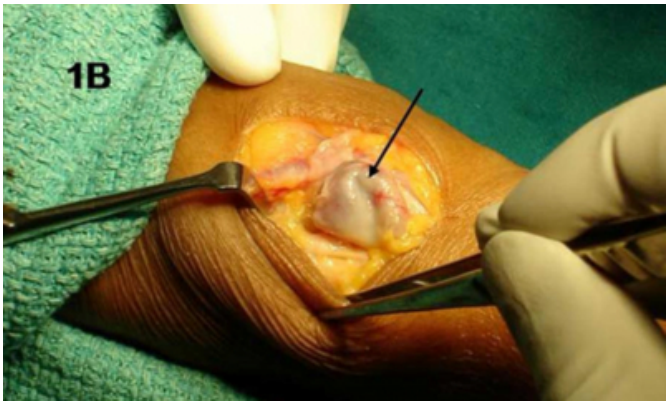
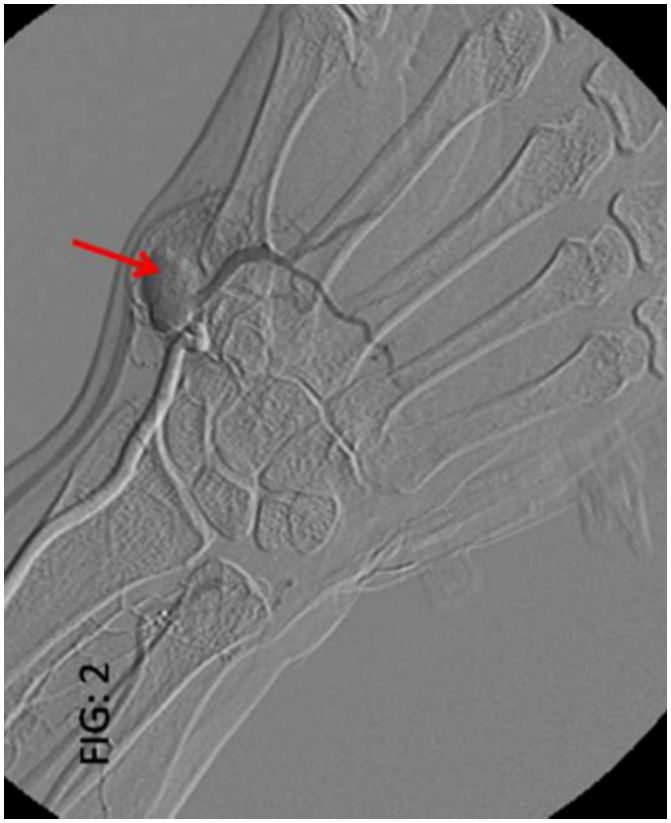


**Figure 3**




Duplex scan showed a 2.0 x 1.8 x 1.0cm anechoic region with thrombosed peripheries suggestive of arterial saccular aneurysm. Left radial artery angiogram confirmed a saccular aneurysm in the anatomical snuffbox (figure 2) and showed a good flow in the ulnar artery and the palmar arches were well maintained. The aneurysm was excised and the radial artery was ligated under regional block (figure 1B). Histopathological examination of the specimen confirmed a true aneurysm and absence of any atherosclerotic changes in the involved part of the artery.

## DISCUSSION

True radial artery aneurysms are extremely uncommon and are even rare among the aneurysms of the upper extremity [5]. True aneurysms of the distal radial artery are even rarer than aneurysms of the proximal radial artery. A review of the literature revealed one case of a true radial artery aneurysm in the anatomical snuffbox [4] and another one distal to the anatomical snuffbox [6]. The bulk of radial artery aneurysms are false in nature and usually associated with trauma or iatrogenic following cannulation of the radial artery. Other predisposing risk factors are old age, abnormal states of the vessel wall (atherosclerosis), multiple attempts at cannulation, and collagen vascular disease.
The diagnosis of a radial artery aneurysm is clinical. It is usually painless with expansile pulsation and a thrill and bruit as in case of large aneurysms, but can be painful if compressing adjacent soft tissues. It can be confused with a ganglion, which may lie in close proximity to the radial artery and create a transmitted pulsation. The importance of Allen's test should be emphasized to demonstrate extent dependence of the blood flow of the hand on the aneurysmal vessel. Imaging plays an important role in diagnosis. Duplex scanning can be the initial radiological technique to confirm the aneurysmal nature of the lesion and to detect the presence of a thrombus. Arteriography can be used for preoperative planning to confirm adequate collateral blood supply.

In our case, there were no predisposing factors or risk factors that might have caused the aneurysm. Doppler ultrasound, angiogram and histopathological examination all confirmed the aneurysm to be a true variety. Clinical examination and arteriogram confirmed the good collateral supply distally. In our case, ligation of the artery and excision of the aneurysmal sac was done.

## CORRESPONDENCE TO

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