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Case report

Spontaneous primary pseudo-aneurysm of brachial artery on an adult patient mis-diagnosed for 8 years: Case report

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ABSTRACT

Brachial artery PSA is extremely rare with only a few cases reported in the literature and all of them are secondary to a known etiology. This is the first report of an adult patient who was free of any medical treatment with primary spontaneous brachial artery pseudo-aneurysm which was mis-diagnosed for 8 years and treated surgically without any complications.

Introduction

Pseudo-aneurysm (PSA) is a pulsatile hematoma due to bleeding into the surrounding soft tissue with fibrous encapsulation and persistent communication between the disrupted vessel and the hematoma, but without normal arterial wall components. Non-healing of the arterial wall disruption will cause the blood to flow back and forth between the two spaces during the cardiac cycle [1]. The overall incidence of PSA after transfemoral catheterization was reported between 1.1 and 14% depending on the type of intervention, period of manual compression and the patient's age and gender [2,3]. PSA of the upper extremity accounted for 27% of all the PSA recorded in the Vietnam vascular registry [1]. In neonates, PSA occur at a rate of about 0.05 after diagnostic catheterization and up to 1.2

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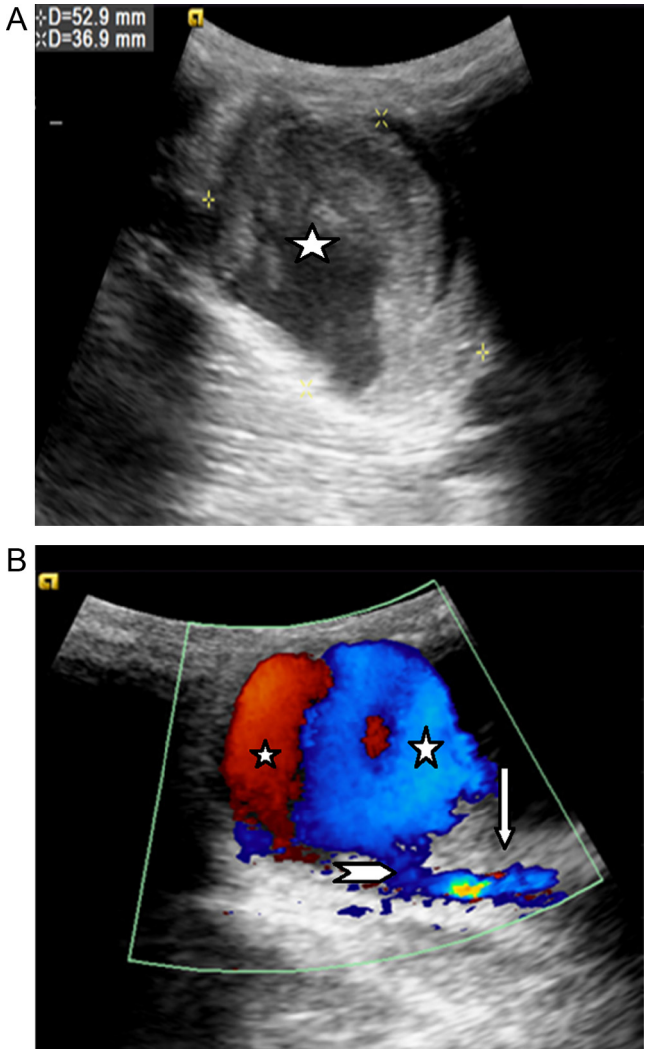

Fig. 1 – (A) Ultrasound showing a pulsating juxta-arterial heterogeneous mass with hypo-echoic eccentric area (star). (B) Color Doppler ultrasound showing (stars) swirling color flow (yin yang sign) in the mass (PSA) separated from the brachial artery (arrow) with color flow within the tract (chevron) between the artery and the mass.

after more complex procedures [4]. The arm is an extremely rare site with only a few cases of PSA of the brachial artery reported [5]. In literature search there was an underlying cause or risk factor for all cases but this is the first case of spontaneous primary PSA of brachial artery in an adult patient [5–7].

Case report

A 41-year-old male patient who was working as a long-distance lorry driver for 22years and who had never seen a doctor in his life presented to a primary healthcare center complaining from painless small swelling on the medial side of his Rt. arm 8 years ago and it was diagnosed as muscular herniation and he was advised to ignore it; in the last 3 years the lesion slowly progressed in size so the patient was transferred to our orthopedic outpatient clinic. The mass did not cause any impairment in the functional capacity of the right upper limb; the patient reported no pain, numbness, tingling sensation, wasting or color changes in the forearm and hand; and there was no history of trauma to the arm, instrumentation (multiple venopuncture, arteriography, dialysis, intervention, drug abuse) or any surgery in the affected area. The patient was not diabetic or hypertensive and had no previous or family history of similar swelling. Examination showed a healthy looking man with no evidence of anemia having an ovoid swelling 4 cm × 4 cm on the medial aspect of the right arm with no visible pulsation, scar marking, skin pigmentation or prominent veins and the color of the skin overlying the swelling was the same as that of the surrounding skin. Palpation revealed 4 cm × 4 cm non-tender, pulsatile, expansile, non-fluctuant mass having the same temperature as that of the surrounding skin, which was compressible, non-reducible, not blanching on pressure, not attached to the overlying skin or underlying muscle or bone, no skin necrosis or ulceration. Axillary and supraclavicular lymph nodes were not palpable bilaterally. Distal neurovascular status was intact. On auscultation no bruit was audible over the swelling, and the heart examination revealed no added heart sound or murmurs to suggest vascular heart disease. The remainder of the systemic examination was unremarkable. Laboratory

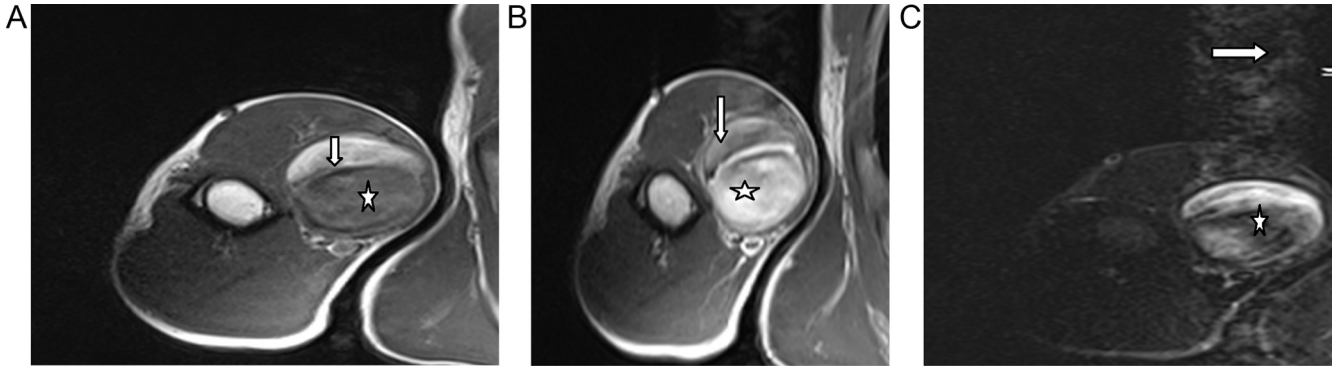

Fig. 2 – (A) Axial T1WI showing the brachial artery PSA with the thrombosed part anteriorly (arrow) and the patent part posteriorly (star). (B) Axial post-contrast injection T1WI showing the enhancement in the patent part of the PSA (star), while the thrombosed part (arrow) is seen anteriorly. (C) Axial T2WI with fat saturation showing the misregistration artifact (arrow) due to pulsation in the right brachial artery PSA (star).