

## Short Report

# Vascular malformation of the hand: a challenge of management

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## Keywords

vascular malformation; arteriovenous malformation; hand; management

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A vascular malformation is a collection of abnormal vessels forming a lesion that is present at birth and may grow in the adulthood [1]. They can develop in any part of the body, including the hand, which is the second most common part of the body, next to the head and neck [2].

Vascular malformations may involve any anatomic structure of the hand (skin, bone, tendon, muscle...), can cause more disability, pain, and discomfort and constitute a significant challenge of management [3].

CT-scan or MRI are warranted for diagnosis and outline the extent of surrounding tissue involvement.

Treatment of the arteriovenous malformation includes conservative treatment, selective embolization/sclerotherapy, partial excision, and radical excision [4].

Radical excision is generally difficult, because the lesion is located in a small space with a high risk of failure and neurovascular injury [5].

Sclerotherapy combined with partial excision yield good results but they are prone to recurrence as well.

We report the case of a 21-year-old man, left hand dominant, presented with a painless swelling of the left hand. There was no history of local trauma or neurological symptoms, including paresthesia or motor dysfunction. On physical examination there is a non-tender subcutaneous movable soft mass in the left hand, Ultrasonography revealed non-specific hypoechogenic regions around the flexor tendons, median nerve and its branches. Computed tomography showed a deep heterogeneous formation in the palm of 3x2.5cm of diameter, compatible with arterial-venous malformation without osseous abnormalities (Figure 1). Sclerotherapy was not performed because our patient was financially incapacitated. Surgical exploration under upper extremity with regional anes-

thesia and tourniquet control, revealed an extensive vascular malformation of the mass, which appeared to infiltrate and to invaginate surrounding soft-tissue structures (median nerve and its branches) making its limits difficult to delineate (Figure 2).

The lesion was dissected meticulously from the involved structures with carpal tunnel release ligation / partial excision of the superficial palmar arterial-venous arch and rigorous hemostasis. Histological examination confirmed the diagnosis of arteriovenous malformation and excluded malignancy. The post-operative course was uneventful. There was no recurrence at six months of follow-up. Regular long-term Clinical follow-up is crucial, due to the inherent risk of recurrence.

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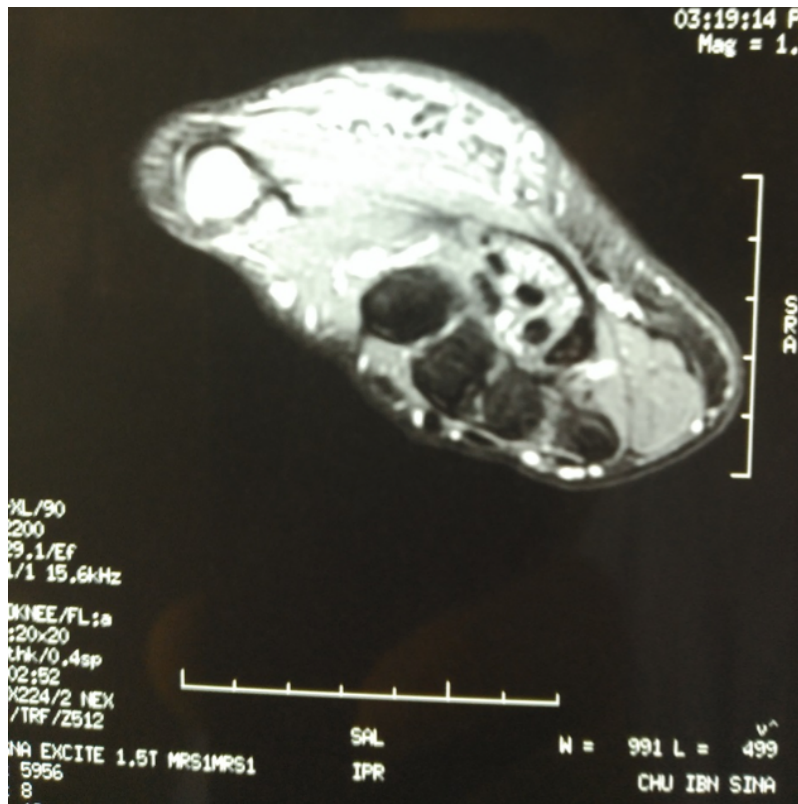


Figure 1

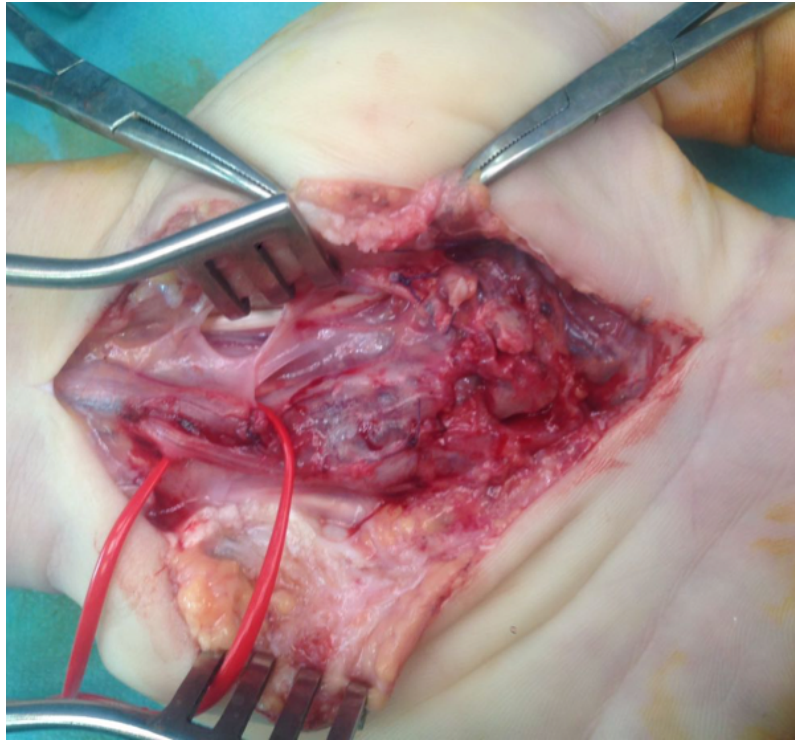


Figure 2

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