Palmar and finger varicosities: Presentation of a case

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KEYWORDS

Varices;
Hand;
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Abstract Palmar and finger varicosities are quite frequent but rarely reported in the literature. They appear as subcutaneous bluish dilations but the symptomatology is often deceptive. Surgery is the most effective therapy. We present a typical case which emphasizes the role of color Doppler ultrasonography (US) in the diagnosis of palmar and finger varicosities and in the evaluation of complications occurring in connection with this disorder.

Sommario Le varici palmari e delle dita, di riscontro relativamente frequente, hanno scarsa evidenza nella letteratura medica. Si presentano come dilatazioni bluastre sottocutanee, la sintomatologia è spesso subdola, la terapia più efficace quella chirurgica. Viene presentato un caso tipico che sottolinea il ruolo dell'eco-color-Doppler nella conferma della diagnosi e nella valutazione delle complicanze di questa patologia.

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Introduction

Palmar and finger varicosities are quite frequent in elderly people but they are rarely reported in the literature. They occur on the palmar surface of the finger, the distal palm area of the hand and the dorsal surface of the finger at the proximal interphalangeal joint level. Palmar and finger varicosities are thought to be caused by a major blow or by repeated exposure to vibration from power tools. Anyhow, this disorder is age related and not linked to inflammation [1,2]. Palmar and finger varicosities appear as

subcutaneous bluish dilations and can be classified in stages on the basis of the clinical symptoms (Table 1) [2]. The symptomatology is often deceptive, as varicosities may occur associated with Raynaud's phenomenon, which often makes it harder to make a correct clinical diagnosis [3]. Surgery is the most effective therapy [4].

A clinical case

A 60-year-old man, a professional pianist, was referred to our department as he had for about 8 years suffered episodes of pain with attacks of poor blood circulation after cold exposure in the fingers of the right hand and, to a lesser extent, of the left hand. When his hands got warm again, the symptoms would disappear. The patient did not use tobacco or consume alcohol and biochemical parameters were normal.

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Table 1 Clinical classification of palmar and finger varicosities according to Clark et al. [2]

Stage 1	Small lesions in the folds between the fingers
Stage 2	Lesions involving the phalanx
Stage 3	Extended lesions involving two or more fingers
Stage 4	Lesions involving the metacarpal head and the palm

Clinical examination revealed third-degree varices. US examination did not evidence abnormalities in the musculotendinous structure or joints, and arterial color Doppler US was negative. Like the clinical examination, also US examination evidenced bilateral venous dilations (Fig. 1). They were limited to the fingers and were nonthrombotic (Fig. 2). The patient refused surgery, but follow-up examinations performed over a year revealed no significant clinical or color Doppler US variations.

Ethical approval for this study was granted by the Medical Research Ethics Committee of our University, and informed consent was obtained from all patients.

Conflict of interest statement

None declared.

Conclusions

The veins of the palms do not have valves, but there is a direct continuity from the palmar carpal arch to the dorsal carpal arch, similar to the circulatory system of the lower limbs. During movement, such as gripping, flexing

Fig. 1 Varices of the finger. B-mode US (a) and color Doppler US (b): sagittal scans show small venous dilations under the skin at the level of the flexor tendons.

Fig. 2 Varices of the finger. US before (a) and during (b) compression. The varices are flexible and major complications (thrombosis) can therefore be excluded.

and leaning on the limb, the venous pressure is intermittently increased leading to hypertrophy of the smooth muscle layer of the venous wall. Moreover, in elderly people, the elasticity of the connective tissue wall is reduced thus weakening the veins [5].

In addition to being age related, the pathogenesis of palmar and finger varicosities seems to be linked also to the patient's occupation, and the kind of pressure the limb is usually exposed to determines the site of the pathology.

The symptomatology is often deceptive and it may therefore be hard to make a correct clinical diagnosis [6]. Color Doppler US performed using a high frequency probe and optimization of the color Doppler parameters (pulse repetition frequency (PRF), wall filter, focalization, etc.) allows confirmation of a clinical suspicion and identification of possible complications, such as thrombosis. Color Doppler US also permits exclusion of arterial or musculotendinous pathologies and may provide indication for an appropriate therapy, which is frequently surgery.

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