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INTRODUCTION.- Upper extremities deep venous thrombosis (UEDVT) is a rare condition. According to the literature, approximately 4–10% of all cases of venous thrombosis may involve the subclavian, axillary or brachial veins (Figure 1). ⁽¹⁾ In the last few decades, the incidence of UEDVT has increased. UEDVT is classified as primary, approximately one third of cases, but there is a wide variety of pathogenesis (Table 1). The onset of UEDVT is usually characterized by arm swelling and pain, but may also be completely symptomatic. Ultrasonography represents a simple and accurate diagnostic tool to demonstrate the problem. UEDVT has major clinical consequences including pulmonary embolism, recurrences, post-thrombotic syndrome, and death. The role of thromboprophylaxis is still controversial.

The large discrepancy between the incidence of UEDVT and that of the lower extremities may be explained by the fact that the upper extremities are less involved in gravitational stress, or in stasis. Moreover, upper extremities contain fewer vein valves than do the legs. ⁽²⁾

Table 1 Pathogenesis of UEDVT
I. Primary (20%)
A. Idiopathic
B. Related to anatomical abnormalities [thoracic outlet syndrome (TOS)]
C. "Effort thrombosis" (Paget-Schrötter syndrome)
II. Secondary (80%)
A. Central venous catheters
Chemotherapy
Parenteral nutrition
Administration of blood product
Hemodialysis
B. Pacemakers
C. Malignancy
D. Arm surgery or trauma
E. Immobilization (plaster cast)
F. Oral contraceptive use
G. Pregnancy
H. Ovarian hyperstimulation syndrome

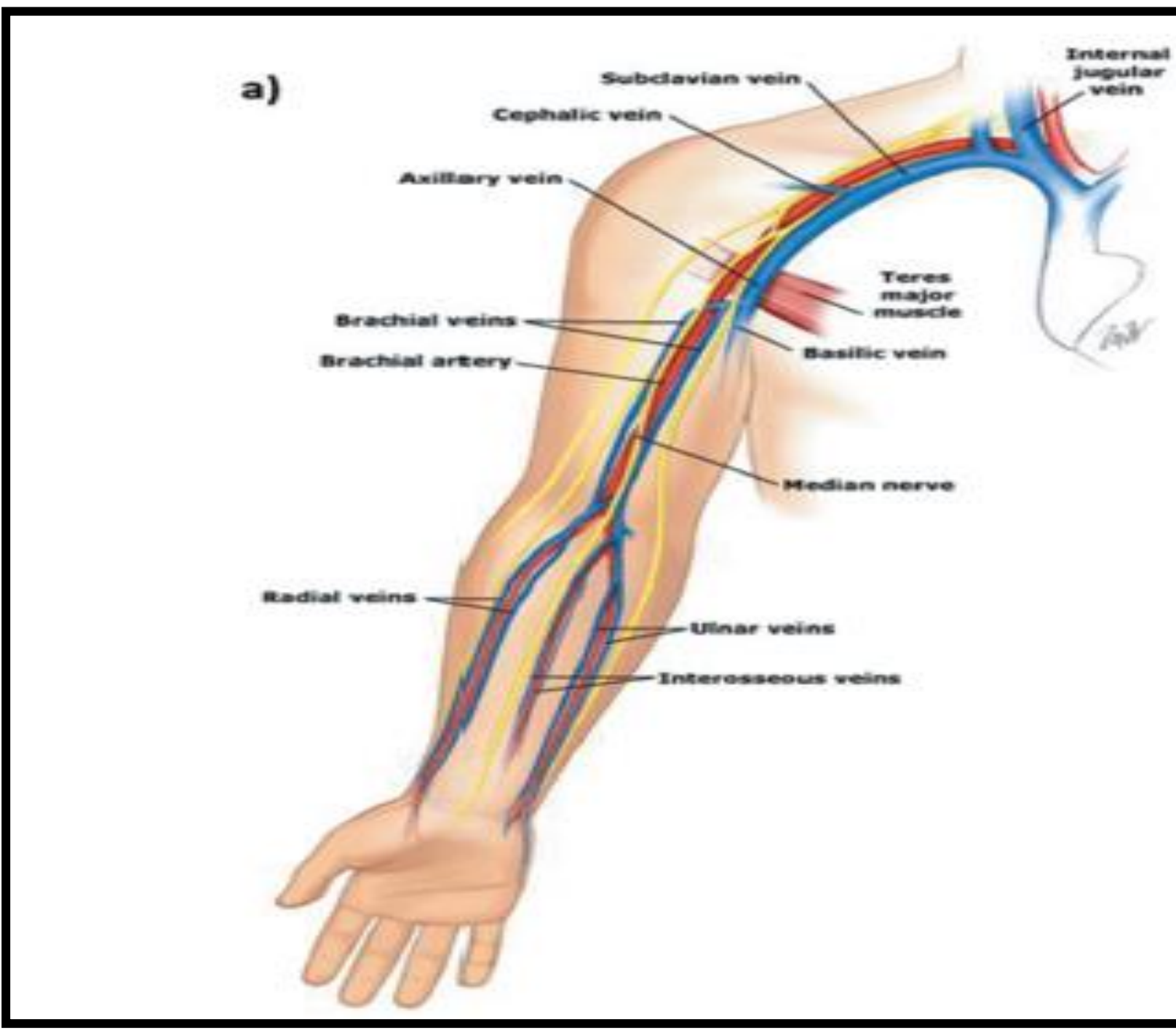


Figure 1. The deep venous system of the arm

PROJECT OBJECTIVES.- The objective is to describe the rare appearance of UEDVT in very frequent fractures among the older population and the management of this pathology



Figure 2. Fracture in 3 fragments of the right proximal extremity humerus

METHODOLOGY.- We present the case of an 85-year-old woman who came to the emergency room due to a fall from her own height, presenting a fracture of the proximal extremity of the bilateral humerus, in 3 and 4 fragments (Figure 2 and figure 3). As a history, she presented arterial hypertension, chronic obstructive pulmonary disease (COPD), arrhythmias controlled with a pacemaker and poorly controlled diabetic disease.

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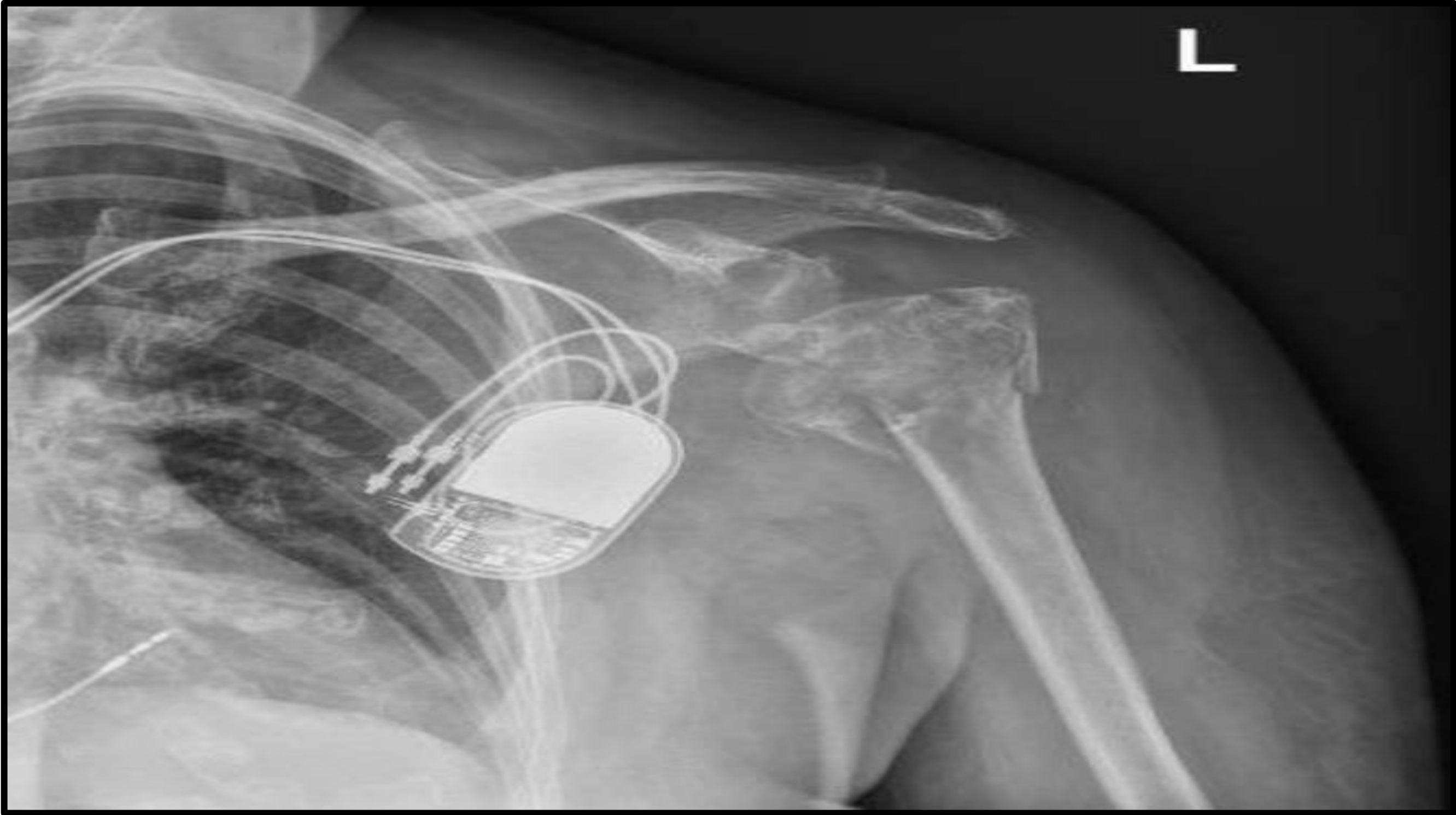


Figure 3. Fracture in 4 fragments of the left proximal extremity humerus

RESULTS.- Given the findings, the management of both fractures was conservative with immobilization with a sling, 9 days later the patient came back due to poor pain control in his left shoulder. The findings in this visit were filling, swelling and reddening of the posterior area, corresponding to the triceps, and the analysis with D-Dimer 5300 ng / mL. We were faced to a situation compatible with UEDVT, so we decided to do an Ultrasound duplex Doppler (Figure 3). It was impossible to identify the axillary vein due to the impossibility of moving the arm due to the previous fracture, and the rest of the study was absolutely normal. Given these findings, we decided to prescribe low molecular weight heparin at therapeutic doses (8.000 IU).

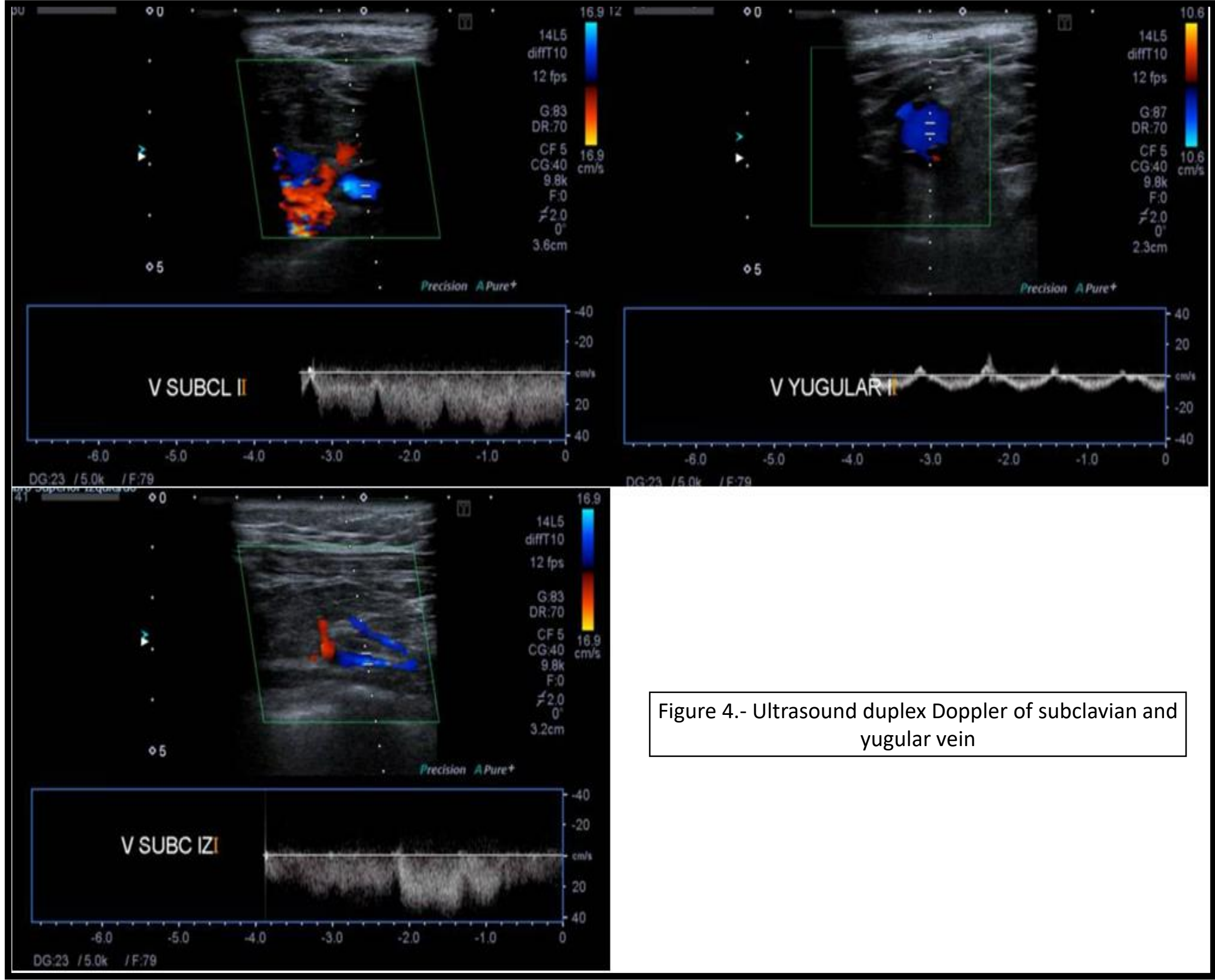


Figure 4.- Ultrasound duplex Doppler of subclavian and jugular vein

CONCLUSIONS.- Presenting this case requires several conclusions:

- The diagnosis of venous thrombosis of the upper limb is primarily a clinical diagnosis and ultrasound cannot be confirmatory. Treatment should be started in case of strong clinical probability. ⁽³⁾
- Ultrasonography is most useful in the evaluation of veins peripheral to the subclavian, such as the jugular, axillary, basilic, cephalic and brachial veins. ⁽⁴⁾
- A simple and effective history can provide arguments in favor of upper limb DVT, despite being a rare disease.
- There is an increase in incidence among the catheter-bearing population and patients with a history of cancer.
- Unfractionated or low molecular weight heparin, followed by an oral anticoagulant are the most common treatments, with strategy of management similar to that of deep vein thrombosis of the leg. Thrombolysis/thrombectomy and surgical decompression are often successful, but less frequently used. ⁽¹⁾