

ULTRASONOGRAPHY PROTOCOL FOR DIAGNOSIS AND CONTROL OF ACUTE HEMARTHROSIS IN HAEMOPHILIC PATIENTS.



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Introduction: In patients with haemophilia (HP), intra articular blood, basically hemarthrosis of repetition inevitably leads to hemophilic arthropathy. Factor replacement therapy, especially the "primary prophylaxis" has proven its effectiveness in reducing the frequency of bleeding but obviously not eliminate the risk of accidental traumatic events (Figure 1), both involving evidence of effusion, including subclinical hemarthrosis. Ultrasound has proven its validity in the diagnosis of musculoskeletal pathology. Its use in haemophilia has been widely recommended, but its standardization as a tool of first use is still debated. The diagnosis and management of acute hemarthrosis (Figure 2) with ultrasound scanning (Figure 3) is readily available at any hospital. Can optimize the treatment of HP and improve patient outcomes, to achieve a satisfactory state of health.



Figure 1



Figure 2



Figure 3

The aim of this poster is to show an ultrasound exploratory protocol: a simple protocol, from routine use, to minimize inter-subjectivity browser, show the disruption of normal patterns and guide the hematological treatment in acute hemarthrosis.

Methods: Exploratory Protocol (Routine ultrasound examination always includes the two joints (healthy and affected):

- ELBOWS** in longitudinal scan (LS), with reference in triceps tendon insertion and elbow flexion to 90° (Figure 4)
- KNEES** LS, reference in patella and quadriceps tendon insertion, 20-30° knee flexion (Figure 5)
- ANKEL** LS, reference hallux extensor tendon, tibia and talar neck, ankle plantar flexion of 10-20°.(Figure 6)



Figure 4

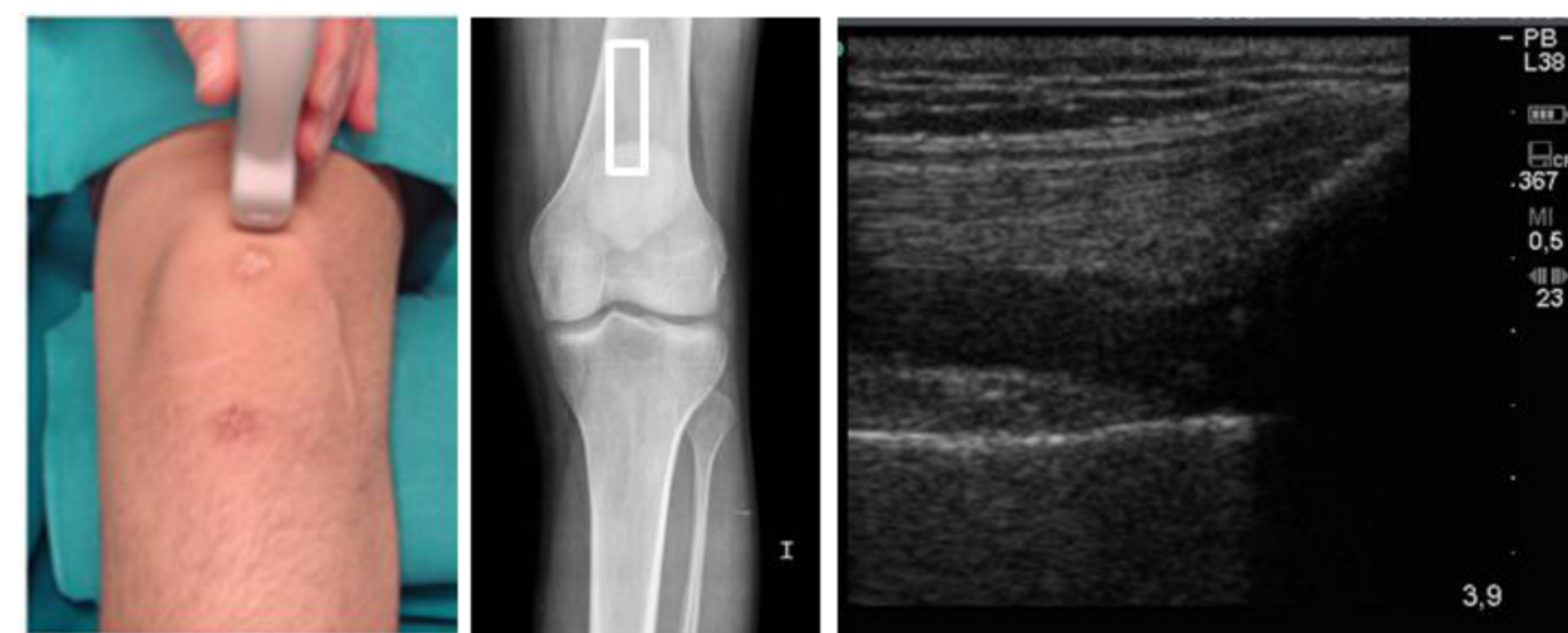


Figure 5

Results: In our center (Total of 371 HP), were detected 147 hemarthrosis (n=100 HP) in the last 12 months (33 elbows [n=22 HP], 57 knees [n=41 HP], 30 ankles [n=24 HP] and 27 in other articulations [n=20 HP]. 100% of the cases were followed up by clinical and ultrasound control. In 72% of knee hemarthrosis, effusion was identified with ultrasonography imaging protocol (whether full exploration includes other scans). Effusion was demonstrated in 100% of the ankles and elbows 100% by our ultrasound protocol.

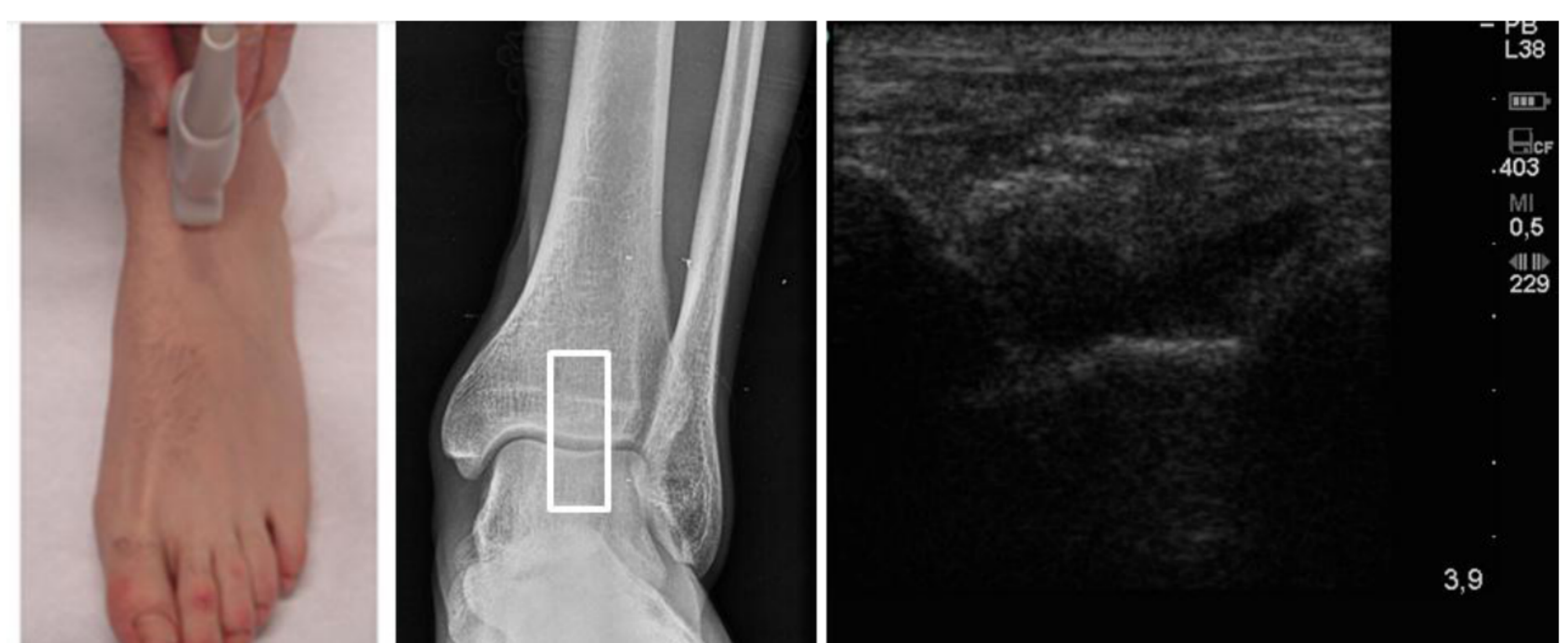


Figure 6

Conclusions: The specific anatomical landmarks and protocols for scan minimize operator-dependent concept in musculoskeletal ultrasonography. The disappearance of clinical symptoms doesn't match the ultrasound evidence of the persistence of the effusion. For this reason is necessary to adequate the haematological treatment.

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