

# JOINT DAMAGE AND BLEEDING IN THE HIP BY ULTRASONOGRAPHY

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## INTRODUCTION

The hip is not a frequent target joint in haemophilic arthropathy (HA). Patients with haemophilia can suffer from hip pain without obvious signs of joint involvement and an inadequate walking performance. They have, very often, haematoma or bursitis.

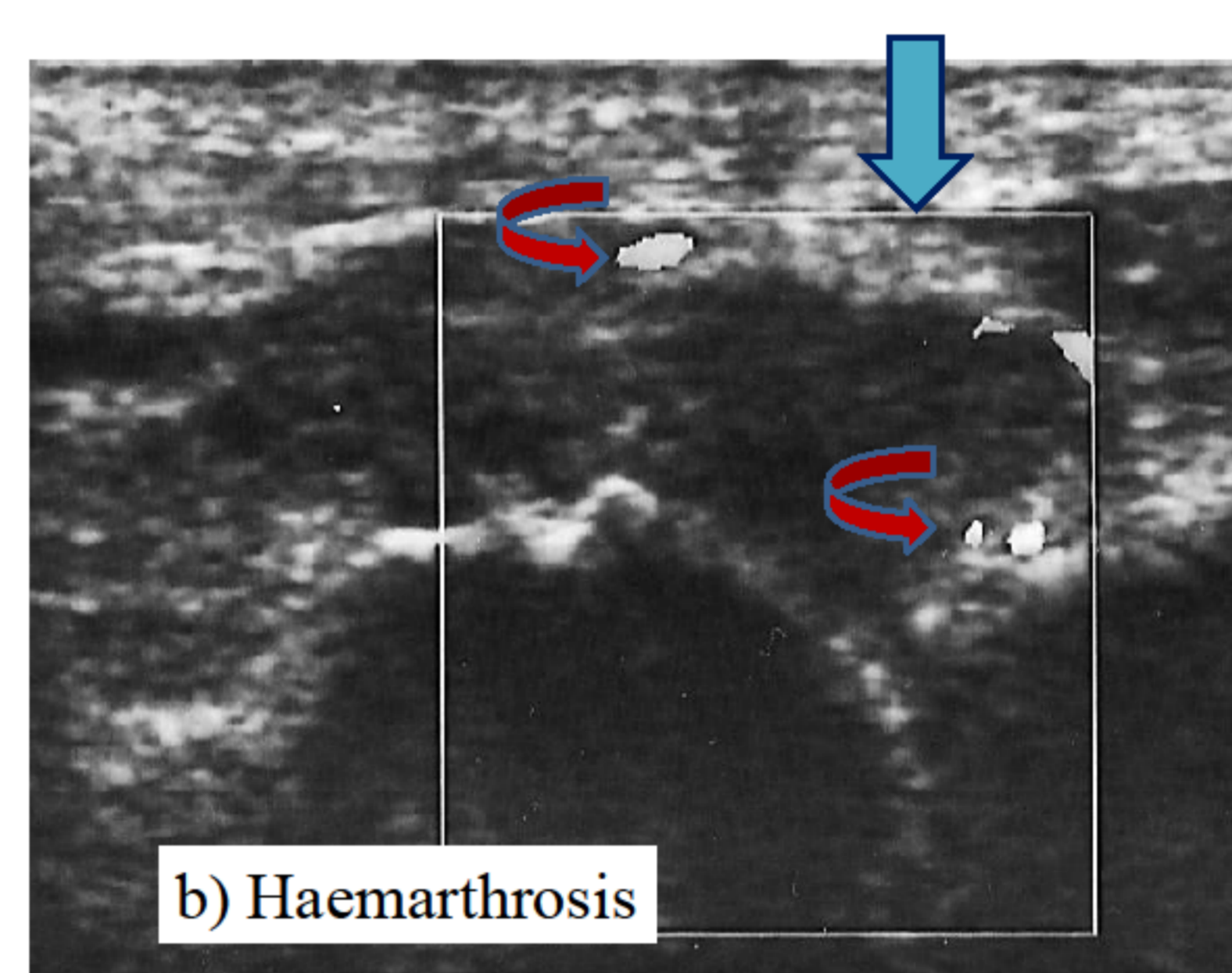
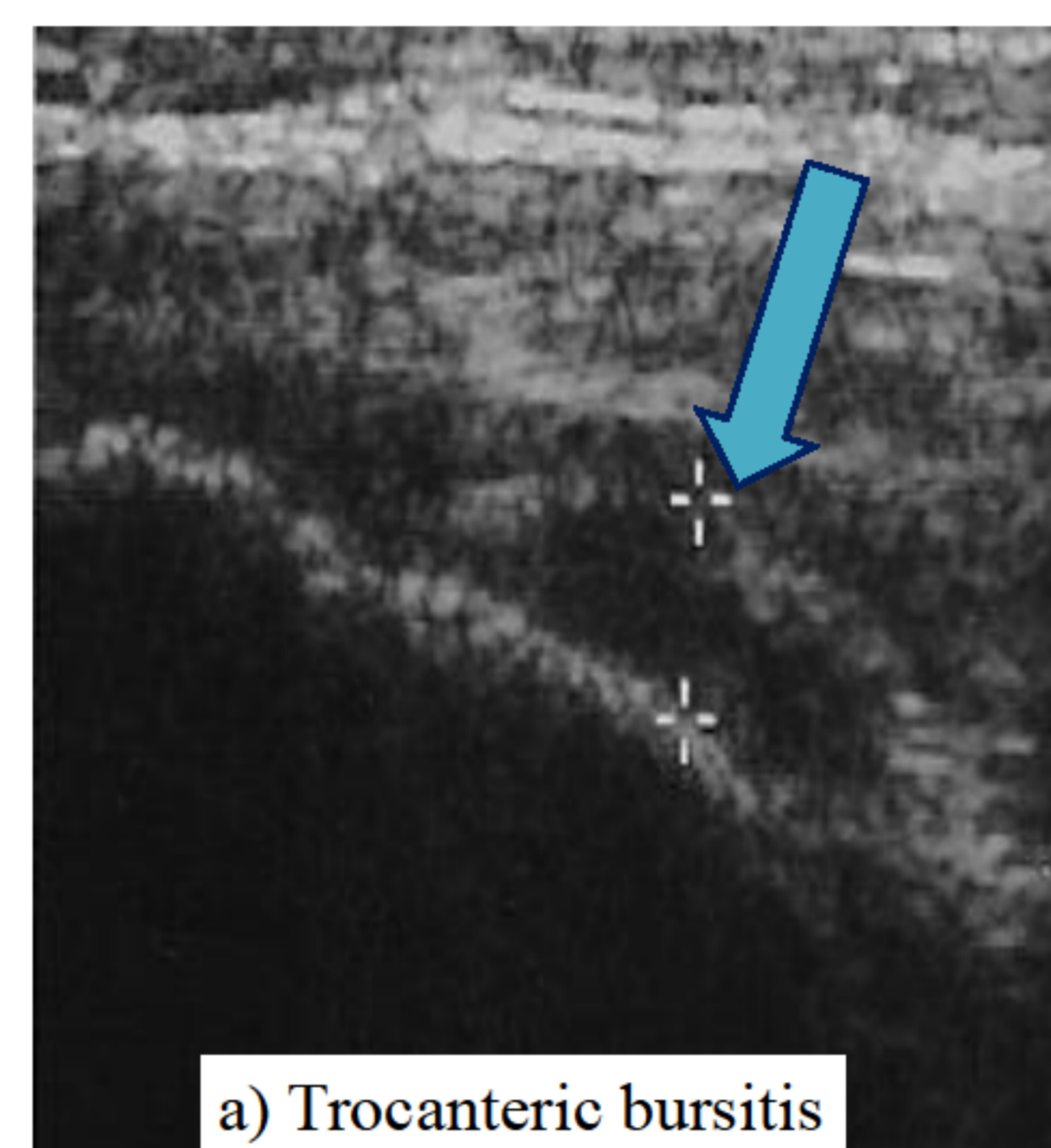
## OBJECTIVES

The aim of the study was to investigate the role of ultrasonography (US) in detection of bleeding and joint damage of the hip in HA.

## PATIENTS AND METHODS

In 30 adult patients, with severe haemophilia A and monolateral hip pain, the iliopsoas and its bursa, the greater trochanteric bursae, and the joint were studied by US. Each patient was evaluated with Equipment ESAOTE My LAB 25 (linear probe 8-12 MHz) and with scan as shown in the figures A and B.

The 30 joints were studied and scored (score ranging from 0 to 21) for effusion, bone remodelling, cartilage damage, synovial hypertrophy, haemosiderin, osteophytes, haemarthrosis, erosion and fibrotic septa (1). Power Doppler US (PDUS) was performed in all patients. The clinical World Federation Haemophiliac (WFH) orthopaedic score and radiological Pettersson score were done in all patients.



## RESULTS

US showed effusion, haemarthrosis, fibrotic septa, synovial hypertrophy, haemosiderin deposition, erosion, osteophytes, bone remodelling and cartilage alterations as shown in the table. In haemophilic studied subjects 15 out of 30 joints showed US score  $\leq 5$ , and 15 US score  $> 5$ . In 8 patients was present haematoma of iliopsoas, in two patients great trochanteric bursitis.

Effusion	Haemarthrosis	Fibrotic septa	Synovial hyper with PDUS	Synovial hyper without PDUS	Haemosiderin deposition	Erosion	Osteophytes	Bone remodelling	Cartilage alterations
20 (67%)	10 (33%)	0	2 (7%)	10 (33%)	4 (14%)	0	7 (23%)	18 (60%)	10 (33%)

The mean sonographic score in HA patients  $> 5$  was in 50% (range 0-21)

The mean WFH orthopaedic score was 39,5 (range 12-57)

The mean Pettersson score was 10,4 (range 6-12)

## CONCLUSIONS

US was an useful tool in the study of the hip, detecting bone and cartilage alterations, effusion and synovitis. PDUS identified an unexpected bleeding in the hip joint and was able to show different entity of haemarthrosis.

We suggest to also evaluate HA modifications in no classical target joints, as hip, by US.

## REFERENCES

<sup>1</sup> Melchiorre et al Haemophilia (2011), 17, 112-117