

## THE MANAGEMENT OF DOMICILIARY ACUTE HAEMARTHROSIS BY ULTRASONOGRAPHY: EXPERIENCE IN A SINGLE CENTER.

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### INTRODUCTION

Haemarthrosis is the most common bleeding disorder and a major cause of morbidity in haemophilia. There is no standardization for the dose and duration of on-demand treatment monitored by clinical data and therefore we use ultrasonography.

### METHODS

During 2011 we performed a domiciliary ultrasound protocol in our Unit consisting of several ultrasound explorations every 3-4 days until joint bleed disappears. When the patient believes that could have an haemarthrosis, we were called for performing a domiciliary ultrasound exploration. We evaluated clinical findings, joint bleed and synovial inflammation, and treatment was adjusted according to these findings.

### RESULTS

We have included 16 patients, median age of 30 (range, 7-46).

- On day 0, we registered that 5 symptomatic patients had no joint bleed by ultrasonography.
- Eleven patients were symptomatic and had joint bleeds (3 elbows, 3 knees, 6 ankles).
- On day +3, we detected 8 joint bleeds, although 7 of them were already asymptomatic and only 4 of them symptomatic.
- On day +7, 5 joint bleeds were registered, 7 remained asymptomatic and 1 symptomatic.
- On day 10, 3 joint bleeds (6 asymptomatic, 0 symptomatic),
- day +14: 2 episodes, 3 asymptomatic and 0 symptomatic.
- Day +17: 0 episodes, 2 asymptomatic and 0 symptomatic.

In symptomatic patients, 25 IU/Kg every 24 hours were required while symptoms persists. In asymptomatic patients, if joint bleed is detected, 30 IU/Kgr twice per week until it disappears. No rebleeding 10 months after the first bleeding episode was detected.



Figure 1. Ultrasound of the ankle in a severe haemophilia patient (Type A , 4 years old): ultrasound on day 0, day +3 and day +7

### CONCLUSIONS

- We recommend performing protocol ultrasounds for the maintenance of intensive replacement therapy while joint bleed persists despite patients symptoms for avoiding rebleedings and target joints.
- We have reported 4 no bleeding episodes when the patient call us believing he has an haemarthrosis.
- Ultrasonography is a useful radiological tool for assessing the evolution and monitoring treatment of haemarthrosis.

