A 3-month-old infant (3kg) was admitted in the Paediatric Intensive Care Unit for extracorporeal membrane oxygenation (ECMO) and anticoagulant treatment (AT) was performed with unfractionated heparin.

During treatment the patient had: A sustained decrease in platelet count (>50% of basal) and inferior cava deep venous thrombosis (DVT).

Once ECMO was finished, AT was modified (enoxaparin).

Due to persistent thrombocytopenia and DVT, heparin-induced thrombocytopenia was suspected.

→ Anticoagulant was replaced to fondaparinux (0.1mg/kg/day).

MATERIAL AND METHODS:

Subcutaneous fondaparinux was started at a dose of 0.3mg/day (0.06mL).

To facilitate administration, the preparation was initially diluted 1mg/mL in normal saline under sterile conditions.

The dose was packaged in 1ml dead space free syringe with a purged needle.

According to the datasheet, the preparation is stable for 24h at room temperature.

AntiXa was monitored 3 hours after administrations. The dose was adjusted according to Table1 until the target level (0.5 UI/mL) was reached.

Subsequently, as the dose increase allowed, the undiluted dose (0.4mg/0.08mL) was fractionated from commercial presentation. Stability of 7 days in the refrigerator was defined according to the risk matrix (low risk) of the Good Pharmaceutical Practices for the preparation of sterile drugs.

The dose of fondaparinux was adjusted according to antiXa (Table2).

Monitoring of antiXa, maintaining correct levels throughout treatment, as shown in graph.

Total platelet count increased to normal values (after fondaparinux initiation).

Anticoagulation therapy was discontinued after 3 months, upon confirmation of DVT resolution.

RESULTS:

- The dose of fondaparinux was adjusted according to antiXa (Table2).

- Monitoring of antiXa-maintaining correct levels throughout treatment, as shown in graph.

- Total platelet count increased to normal values (after fondaparinux initiation).

- Anticoagulation therapy was discontinued after 3 months, upon confirmation of DVT resolution.

CONCLUSION AND RELEVANCE:

Individualized dosing of fondaparinux by dilution or fractionation has allowed DVT treatment, using a commercial presentation unsuitable for pediatrics.

We verify stability of the fractionated dose with the therapeutic effect.