A-131 | **SUCCESSFUL AND COST-EFFECTIVE USE OF FC-FUSED FIX DURING MAJOR ORTHOPAEDIC SURGERY**

C. HERMANS*[1], E. THIENPONT[2], S. EECKHOUDT[3], C. LAMBERT[1]

[1]Cliniques universitaires Saint-Luc, Haemostasis and Thrombosis Unit Division of Haematology, Brussels, Belgium,
[2]Cliniques universitaires Saint-Luc, Department of Orthopaedic Surgery, Brussels, Belgium,
[3]Cliniques universitaires Saint-Luc, Department of Biological Haematology, Brussels, Belgium

Extended half-life Fc-fused FIX (Fc-FIX) (Alprolix®) represents an attractive and validated alternative for prophylactic replacement therapy in patients with severe haemophilia B (HB). There have been few reports of the use of Alprolix® in patients requiring major orthopaedic surgery and the optimal modalities of Fc-FIX in this setting have not yet been formally established. We report the case of a 63-year-old patient with severe HB on secondary prophylaxis with Alprolix® (6000 U every 10 days / body weight: 70 kgs / AJBR: 0) admitted for left-knee total arthroplasty. His Fc-FIX half-life estimated by WAPPS-Hemo was 122 hours (73-170). One hour before surgery, he received a single bolus of 7000 U Alprolix® (100 U/kg) raising FIX from 9 % (trough level measured 10 days after last infusion) to 132 % (one-stage APTT assay). Six hours post-op, FIX was measured at 80 %. During the post-operative period, 3000 U Fc-FIX were given on days 1-5 and on day 7 with a FIX maintained between 51 to 62 % on Days 1-5 and measured at 45 % on Day 7 (last infusion on Day 5). There was no significant blood loss during the peri- and post-operative period. Rehabilitation started on day 1 and the patient was discharged on day 7 post-op. In total, 7 boluses of Fc-FIX were given with a cumulative dose of 25000 U. By comparison, this is less than half the dose of standard FIX given by continuous infusion that would have been required in the same setting (more than 56.000 U considering 6U/kg/h 3 days and 4U/kg/h 4 days). After discharge, prophylaxis with 3000 U of Alprolix® U twice weekly was reinitiated for 2 weeks followed by 6000 U/10 days. There was no adverse event as well as no evidence of clinical or subclinical venous thrombosis as ruled out by bilateral venous doppler US performed on day 7. Thirty days post-op with the use of 43000 units and 12 boluses, the patient had fully recovered and able to practice his daily sportive activities. This clinical case illustrates the haemostatic efficacy, ease of administration, perfect tolerance and cost-effectiveness of Fc-Fused FIX given by bolus infusions as replacement therapy for patients with haemophilia B undergoing major orthopaedic surgery, not only in the peri-operative period but also during the entire rehabilitation phase.