Letter to Editor

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Preoperative Fondaparinux for Deep Vein Thrombosis in Patients with Hip Fractures

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ABSTRACT

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To the Editor

Deep vein thrombosis (DVT) is a frequent finding in patients presenting with hip fractures [1]. Current recommendation on DVT management with unfractionated heparin (UNH) might be difficult and prone to complications in some circumstances. International guidelines enable the use of fondaparinux in DVT management [2]. Fondaparinux displays some advantages in DVT management: a single subcutaneous injection, no need for laboratory monitoring, a reduced incidence of intolerance reactions, and no risk for Heparin-Induced Thrombocytopenia (HIT) [2-4]. This retrospective case series aimed to gather information about its preoperative use in our clinic. We assessed the efficacy of the treatment with fondaparinux, and secondary we recorded the need for perioperative transfusion and other postoperative complications. Data obtained from 138 records of the patients treated with 7.5 mg (5 mg in patients under 50 kg) fondaparinux (Arixtra®, Glaxo Wellcome Production, Notre Dame de Bonneville, France), for DVT, entered the database. The patients with DVT have had their diagnosis established by Doppler ultrasound, and the same test was repeated after five days of treatment, in each patient. We registered demographic data, co-morbidities, pretreatment with low molecular weight heparins (LMWH), dose and duration of treatment with fondaparinux, time to surgery after cessation of fondaparinux, type of anesthesia, the in-hospital mortality, and the hemorrhagic events. The amount of blood transfusion (number of units transfused) until the fourth postoperative day was recorded. The transfusion criteria were hemoglobin < 7g/l or hemodynamic instability in circumstances of blood loss. In patients with coronary heart disease, the targeted hemoglobin level was 10g/l. In patients with persistent DVT after fondaparinux administration, the subsequent treatment applied was recorded as well as the complications if these occurred.

Data were expressed as mean, standard deviation (SD), median (range), numbers and percentiles. Out of 138 patients' files, four were dropped out because of lacking information, and a remaining 134 of medical records entered the study analysis. Patients' age was between 24 and 94 years with a median of 75 years, 53 (39.5%) were male and 81 (60.5%) female. The demographic data and risk factors for DVT are presented in Table 1. One hundred and eight patients (80.5%) with DVT who received fondaparinux have been gone further with surgery, and 98 patients received spinal anesthesia and 10 general anesthesia. We did not record any evidence of heparin-induced thrombocytopenia, major bleeding, or spinal/epidural hematoma. In Table 2 we registered data regarding the treatment with fondaparinux and its complications. Fondaparinux was efficient in 89.6% of cases, to treat venous thrombosis. There is a lack of literature regarding the preoperative use of 7.5 mg fondaparinux for DVT, even if there are confirmations on its efficiency and safety, in various situations [5,6]. Our study showed efficacy and safety with the preoperative use of fondaparinux, even if regional anesthesia was used. The above data have been collected in only one single medical center and there is a need for further studies to validate our findings.

Table 1: Demographic data and risk factors in studied patients (n=134).

Characteristics	Values
Age (yr), median (range)	75 (24, 94)
Gender composition (number male/female)	53/81
Obesity [n, (%]	8 (5.9%)
Diabetes [n, (%)]	10 (7.4%)
Neoplasm [n, (%)]	7 (5.2%)
Cardiovascular disease (cardiac insufficiency, stroke) [n (%)]	30 (22.3)
DVT history [n, (%)]	7 (5.2%)
Antiphospholipid syndrome [n, (%)]	1 (0.74%)

SD - standard deviation; DVT - deep vein thrombosis; n - number of patients.

Table 2: The fondaparinux treatment characteristics and complications.

Characteristics	Values (n = 134)
Time from cessation of fondaparinux to surgery (hours), [median (range)]	36 (36, 48)
Inefficacy of the treatment [n, (%)]	14 (10.4%)
Transfused patients [n, (%)]	63 (47%)
Transfused PRB units/patient [median (range)]	1 (1, 4)
Hemorrhagic events [n, (%)]	1 (0.74%)
Mortality [n, (%)]	5 (3.73 %)

PRB- packed red blood cells, SD - standard deviation, n - number of patients.

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