DRUG USE EVALUATION OF HEPARINS PRESCRIBED AS A 'SINGLE DOSE' IN HOSPITAL

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Background:

Although the use of heparins is widespread, a proper evaluation of their clinical use might be often difficult due to differences in the Regulatory Guidance Drug Registration (RGDR) for each type of indication and dosage.

Purpose:

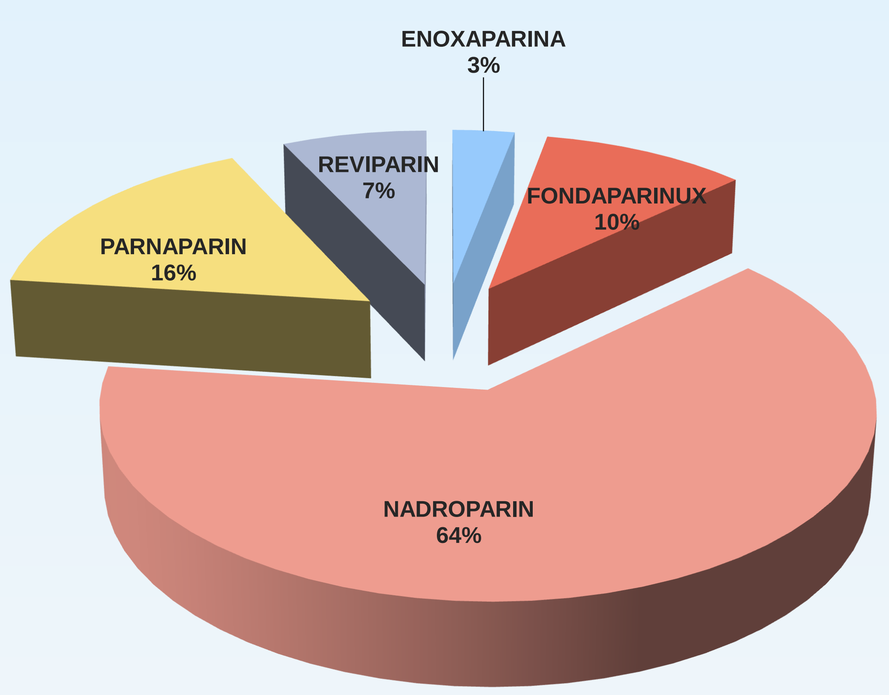
By following the Drug International Guidelines, we aimed to evaluate the use of all prescribed heparins during three months at our Hospital.

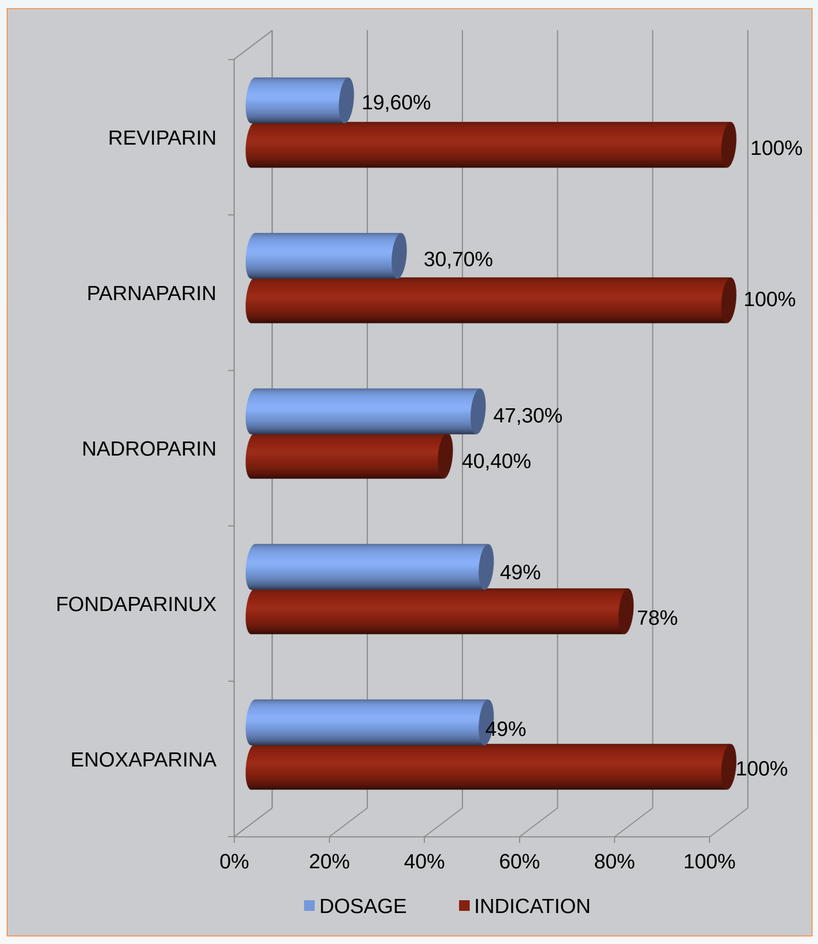
Materials and methods:

All “single dose” prescriptions, derived from all clinical and surgery divisions except for the orthopedic division, were recorded and validated by the hospital pharmacy by a central computerized system. All the prescriptions were analyzed by selecting the type of heparins used associated to the diagnosis for each patient. The drug-use evaluation was calculated (%) by analyzing the type of indication (I) and dosage (D) for each patient. The indications and dosages were compared with the RGDR.

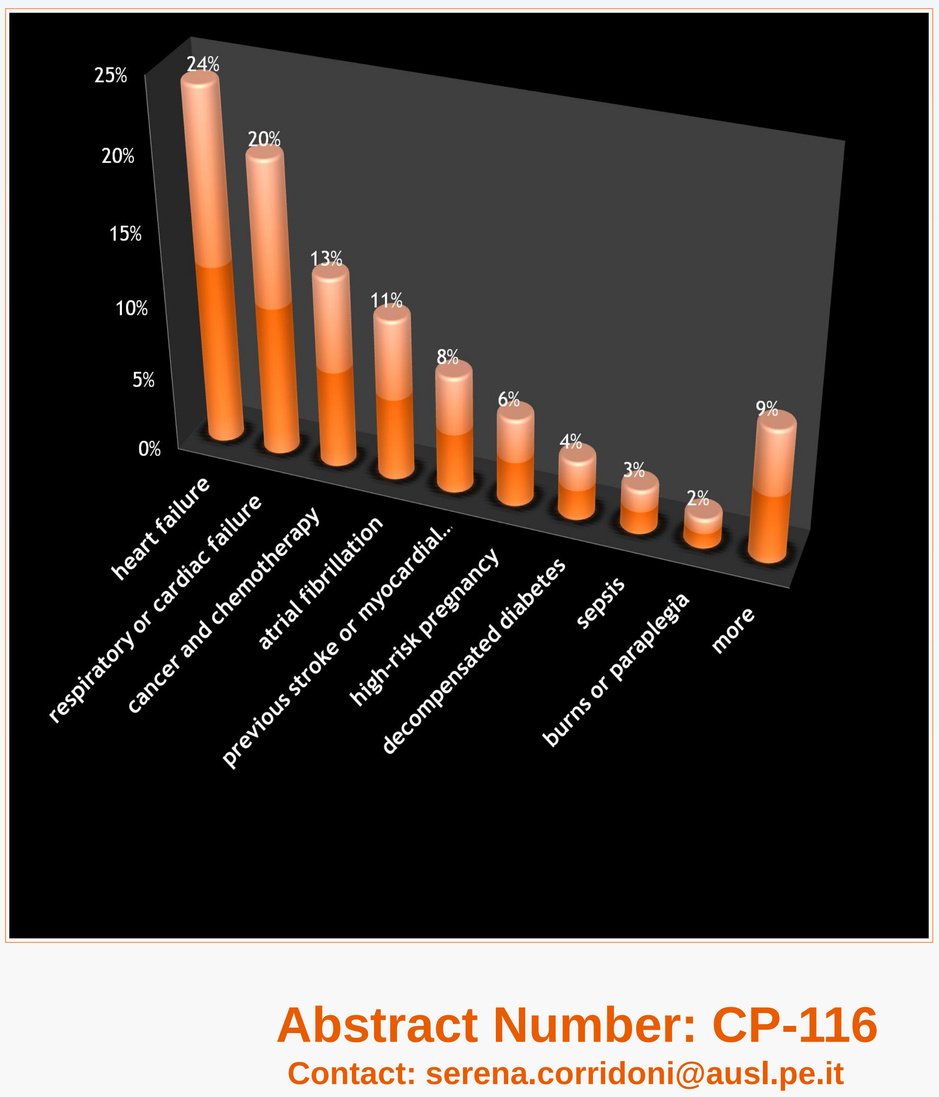
Results: 1090 patients were treated with enoxaparin (2.7%), fondaparinux (11%), reviparin (6.7%), parnaparin (16.4%) and nadroparin (63.2%). The most common diagnoses were: *1) deep vein thrombosis prophylaxis in major surgery patients (50%)* and 2) high risk of deep vein thrombosis prophylaxis in medical patients (41.9%). In line with the international guidelines, 457 medical patients with high risk of deep vein thrombosis prophylaxis resulted as: heart failure (24%), respiratory or cardiac failure (20%), cancer and chemotherapy (13%), atrial fibrillation (11%), previous stroke or myocardial infarction (8%), high-risk pregnancy (6%), decompensated diabetes 4%, sepsis (3%), burns or paraplegia (2%) and more (9%). Drug-use evaluation resulted as follow: enoxaparin (I=100%-D$^{\alpha}$=49%) ; fondaparinux (I$^{\beta}$= 78.4%-D$^{\alpha}$=49%); reviparin (I=100%-D$^{\alpha}$=19.6%); parnaparin (I=100%-D$^{\alpha}$=30.7%); nadroparin (I$^{\pi}$=40.4%-D$^{\alpha}$=47.3%).

$^{\alpha}$use higher dosages not indicated in 1) and 2)
$^{\beta}$used in 2) in non-acute patient
$^{\pi}$use in 2) not indicated in RGDR





Conclusions: Our study demonstrates that the proper use of heparins may be not always in line with the RGDR. This may be due to the fact that clinicians prescribe heparins in the prophylaxis and treatment of Venous Thrombo Embolism without indicating the specific type of molecules but considering them as a unique type of drug. Therefore, the use of heparins may be ameliorated by providing the clinicians a more guided treatment plan that follows the RGDR.



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