

The Use of Unfractionated Heparin in Cardiology Wards

John Bonello, Daniel Cassar, Maria Farrugia, Robert G Xuereb, Alexander Gatt

AIM

Despite the introduction of low molecular weight heparin, unfractionated heparin (UH) is still widely used. It is common to discover that after days of heparinisation, a target aPTT of 1.5-3.0 is not achieved. To audit the use of UH within cardiology wards and the aPTT-r as a surrogate to the effect of heparin.

Methodology

Prospective audit from 15-5-2018 to 11-7-2018. Patients treated with UH admitted to CMW/CCCU were included. Data was collected from patient's notes, discharge letters and iSOFT Clinical Manager and processed on Microsoft Excel. The provisional guidelines for the Use of Heparin Infusion, prepared by the Haematology Department, Mater Dei Hospital, was used as a standard.

Results

85 patients were recruited(61.2% male). Average age:69 years; ages range:37-93 years. Indications for heparin included acute coronary syndrome(54.1%), atrial fibrillation(34.1%), thromboembolism(5.9%), others(5.9%). 383 aPTT-r results were collected. 34.2% of the aPTT-r results were within the recommended range of anticoagulation(i.e. 1.5-3.0). 56.7% of the aPTT-r results indicated under-anticoagulation(aPTT-r <1.5) while 9.1% of the results indicated over-anticoagulation(aPTT-r >3.0). 38 patients(44.7%) never achieved a target aPTT-r. Another 38 patients had mixed results of aPTT-r within and out of range. Only 9 patients(10.6%) had aPTT-r results within range throughout.

Conclusion

Most patients in cardiac wards receiving UH are undertreated, increasing risk of thrombotic events while a minority(9.1%) are over-treated, exposing them to excess risk of bleeding. The majority of patients were receiving heparin for acute coronary syndrome, meaning that they are also receiving DAPT, exposing them to further risk of bleeding if their aPTT-r is >3.