Proceedings of the British Pharmacological Society at http://www.pA2online.org/abstracts/Vol11Issue3abst113P.pdf

Enoxaparin dose omissions due to patient refusal: a retrospective analysis using an electronic prescribing and medication administration system

Rajinder Andev[1], Sarah Thomas[1,2], Sarah McDowell[2], Jamie Coleman[1,2]. [1]University of Birmingham, West Midlands, UK, [2]University Hospitals Birmingham NHS Foundation Trust, West Midlands, UK

Background: Venous thromboembolism is common and around 25,000 people in England die from hospital-acquired venous thromboembolism (VTE) every year. Low molecular weight heparins are prescribed in hospital for the prophylaxis of VTE in both surgical and medical patients, and also for the treatment of VTE and acute coronary syndrome. However, high rates of non-administration of VTE prophylaxis have been demonstrated. Patient refusal has been documented as a reason for non-administration; it is important to understand why patients refuse therapy in order to implement intervention strategies that optimise uptake.

Objective: We aimed to determine the proportion of administrations for enoxaparin refused by patients and to characterise the reasons for refusal provided by the nurse at the point of administration.

Methods: We used data from the hospital-wide electronic prescribing and medication administration (ePMA) system at the University Hospitals Birmingham NHS Foundation Trust. We extracted data between 1 April 2011 and 31 March 2013 for all in-patient doses of enoxaparin prescribed to be administered. We then determined how many of these were not administered due to patient refusal. Nurses can provide free-text comments within the ePMA system relating to any missed dose. Where free-text messages were available, these were analysed and categorised into themes.

Results: Over the two-year period examined, 1.9% (n=7491) of the 398722 charted enoxaparin doses were not administered because the patient refused the drug. Based on an analysis of the dose, 96.4% (n=7220) doses were prescribed for prophylaxis and 3.6% (n=271) for treatment. Almost two-thirds (n=4561, 60.9%) of the refused doses of enoxaparin had no information entered in the free-text section.

Where a free-text message was available for analysis, 33.9% (n=993) provided no rationale for the refusal (for example, comments such as: *'patient refused dose'* were entered). The *'timing of the dose'* led to 22.7% (n=666) of patient refusals; the most common reason being that the patient was due to go home (n=508). In 15.8% (n=463) of cases, the dose was refused for a clinical reason or perceived adverse effect. Patient mobility was the most frequent rationale provided in this category (n=358), with almost a half (n=193) of the messages stating that the patients were sufficiently mobile and no longer needed the dose. Of these refusals, 34.4% (n=123) were prescribed under a surgical directorate. Problems with administration made up 12.4% (n=364) of the total dose refusals, with almost half of these due to aggressive patients (n=154). Almost 7.5% (n=219) of refused doses had no clinical rationale documented for the refusal, with almost a quarter of these (n=48) being missed because patients did not understand the need for therapy.

Conclusion: Enoxaparin is a high-priority medicine and it is a concern that patients are refusing doses during their hospital stay. Overall the documentation of any rationale for a patient refusal was poor. Where a free-text comment was provided, this highlighted the need for improved nurse and patient education on the importance of VTE prophylaxis, as well as the appropriate use of the 'refusal' code. Mandating a structured method for documenting reasons for refused doses may facilitate medicines optimisation at the point of administration, thus avoiding missed doses for clinically inappropriate reasons. In addition, a structured documentation process would enable us to better understand why patients refuse doses and therefore inform bed-side education.