Pregabalin for post-operative pain following total knee replacement: an audit to review effectiveness and side-effects

Background: our Trust’s standardised prescribing recommendation for patients undergoing total knee replacement (TKR) surgery has included a fixed dose of pregabalin as an analgesic adjunct since 2015. During 2016 there was a series of falls reported on the orthopaedic ward. As falls are included amongst the recognised side-effects of pregabalin, the inpatient pain service reduced the dose of pregabalin being recommended for patients following TKR from 50mg BD to 25mg OD. We have conducted this retrospective audit to assess whether reducing the dose has reduced the rate of falls and to determine whether the reduced dose of pregabalin was as effective as the previous, higher dose.

Aims: 1. Determine whether the rate of inpatient falls decreased after our analgesic protocol was changed to include a lower dose of pregabalin. 2. Review whether the reduction in pregabalin dose had any effect on length of stay or total additional analgesic requirements.

Methods: we identified a month in 2016 (October) when patients were receiving 50mg BD pregabalin and a month in 2017 (February) when patients were receiving the reduced dose of 25mg OD pregabalin. For each month we selected the first 40 consecutive patients undergoing total knee replacement surgery. We reviewed their medical and nursing notes to extract the following information: length of stay, any falls the patient suffered, whether pregabalin was prescribed and doses of other analgesia they received during their admission. We used simple statistical methods to compare the two groups of patients; specifically the incidence of falls, their total length of hospital stay and their opioid analgesic requirements.

Results: the two groups were comparable in terms of average age and distribution of gender. In the October group 34 of the patients were prescribed pregabalin (50mg BD) compared with 32 in the February group, who were prescribed 25mg OD. Across both patient groups there was only one inpatient fall documented in the notes, which was a patient in the October group who was not prescribed pregabalin. Additional analgesia was measured in number of doses and total dose of ‘as required’ (PRN) oral morphine solution. The patients in October receiving the higher dose of pregabalin used a total of 2090mg morphine during their inpatient stay (average per patient 52mg). In the February group receiving lower dose pregabalin the total was 3720mg with an average per patient of 93mg. We also noticed a marked difference in total length of stay, with the patients receiving higher doses of pregabalin (October group) having a mean length of stay of 3.6 days, compared with the February group, whose mean length of stay was 4.45 days.

Conclusions: reduction in the recommended pregabalin dose for patients undergoing total knee replacement has significantly increased their opioid requirements and appears to correlate with an increased length of hospital stay. This is without any apparent reduction in falls risk: across the period we studied there were no inpatient falls attributable to pregabalin side-effects.