

Some postoperative patients with a high pain score accept the pain and move appropriately.

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Background and aims

Various methods exist to evaluate key aspects of postoperative pain. The numerical rating scale (NRS) is widely used to measure pain intensity on a scale from zero (no pain) to 10 (worst pain imaginable). One clinically important goal could be a level of pain that is not only acceptable for the patient, but also allows the patient to move appropriately as judged by a professional. Relationships between NRS and other methods of pain measurement are not fully established. Our aim therefore is to describe and analyse the relationships between NRS and three different measures of pain: acceptability, interference with physical functioning, and a measure combining the two.

Methods

Prospectively collected pain measurements of all postoperative patients, who have been treated by the acute pain service (APS) on day 1, 2 and 3 after surgery, in the period from 1 January to 31 December 2012, were extracted from the APS database to perform this cross-sectional study. The relative frequencies of the two possible outcomes for patient opinion whether the pain is acceptable (yes/no), the nurses' observation on the patient's ability to make appropriate movements (good/moderate or bad) and the combination of these two (acceptable pain and good movements) were plotted against the NRS for movement evoked pain (NRS-MEP).

Results

3,455 assessments were obtained for the first three days after major surgery. Distribution A suggests that up to 43% of patients associate an NRS 8-10 with acceptable pain. In distribution B is shown that up to 17% of patients with an NRS 8-10 move appropriately. In distribution C only 9, 3 and 6 percent of the patients both found their pain acceptable and made appropriate movements, in spite of NRS scores of 8, 9 and 10, respectively.

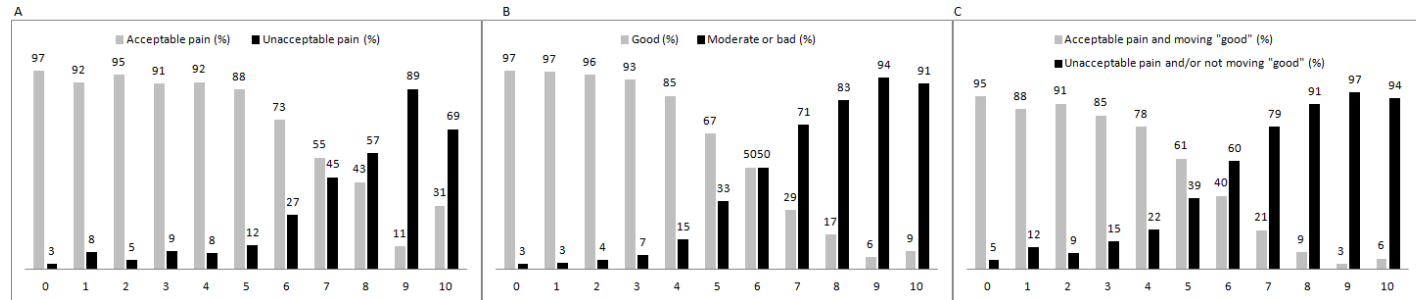


Figure 1: Observed relative frequencies for patients' opinion (A), nurses' observation (B), and the measure combining patient's opinion and nurses' observation (C) against NRS-MEP scores gathered during the first three postoperative days and put together.

Conclusion

There is a relationship between NRS movement evoked pain and three different measures of pain: acceptability, interference with physical functioning, and a measure combining the two. Future research should focus on larger samples to address this issue.

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