Irish Medical Journal
Established 1867

Issue: Ir Med J; Vol 114; No. 9; P476

Optimising Analgesia for Hip Fracture Patients Using Quality Improvement Methodology

T. Mac Mahon, G. Markey

1. Emergency Department, Midland Regional Hospital, Tullamore.
2. Emergency Department, University Hospital Waterford.

Dear Editor,

Hip fractures in older adults commonly occur after falls, particularly in Ireland, which has one of the highest standardised rates of hip fractures worldwide.[1] Optimal care of these patients is multifaceted but clearly defined, and includes a strong focus on comfort for this painful injury.[2] Regional anaesthetic techniques, such as the fascia iliaca nerve block, have been well-described as providing good analgesia, and can be administered in the emergency department without the side effects associated with systemic opioids.[3] In 2019, the Irish Hip Fracture Database (IHFD) began including preoperative nerve blockade in their dataset, with widespread regional variation noted in provision of this essential component of quality care.[4]

We convened a multidisciplinary quality improvement team and utilised the Institute for Healthcare Improvement's 'Model for Improvement' to address the low rate of block provision (14.8% of patients) at the emergency department of University Hospital Waterford, a model 4 acute hospital in the South/Southwest Hospital Group.

The primary project drivers were identified as early recognition of patients with hip fractures and early access to multimodal analgesia, with a focus on the implementation of an ultrasound-guided fascia iliaca block (FIB) service anchored within the emergency department. Three work packages to support this goal were developed: 1) generic training on analgesic options for older people and specific training on FIB provision, with supervised practice for middle grade Emergency Medicine (EM) NCHDs; 2) appropriate monitoring, documentation and governance controls to ensure safety of block provision; 3) supply and standardisation of required consumables.

The primary process measure was defined as the percentage of eligible patients receiving a FIB, with a goal of 90% provision set, tracked on a run chart over 23 weeks from August 2017 to January 2018.

Over the project period, 157 eligible patients with proximal femoral fractures attended UHW; of these 133 received a block (84.7%). These results were sustained over two years later, with a block completion rate of 73% for 2019.

Previous work to introduce analgesic protocols has either used a traditionally audited pre- and post-intervention approach, with the attendant risk that any change in practice will lapse once the study period ends, or has included analgesia as a component of a comprehensive care bundle, which can be slow and complex to implement. In contrast, this study uses an iterative quality improvement methodology to embed novel practice rapidly but sustainably within organisational culture. It thereby provides a practical template which other hospitals with low rates of regional nerve blockade, as reported by the Irish Hip Fracture Database, can implement to improve this aspect of the quality of care they provide to a vulnerable and growing cohort of patients. Lastly it demonstrates the utility of quality improvement methodology more generally within the Irish health service to drive meaningful change.

Corresponding Author:
Thomas Mac Mahon
Midland Regional Hospital, Tullamore
E-Mail: tmacmahon@gmail.com

References:

1. Walsh ME, Ferris H, Coughlan T, Hurson C, Ahern E, Sorensen J, et al. Trends in hip fracture care in the Republic of Ireland from 2013 to 2018: results from the Irish Hip Fracture Database. Osteoporos Int 2020
2. National Institute for Health and Care Excellence. Hip fracture: management. NICE guideline (CG124), 2011 (updated 2017).
3. Scurrah A, Shiner CT, Stevens JA, Faux SG. Regional nerve blockade for early analgesic management of elderly patients with hip fracture - a narrative review. Anaesthesia 2017
4. National Office of Clinical Audit. Irish Hip Fracture Database National Report 2019. Dublin: National Office of Clinical Audit, 2020.