Reducing morbidity in isolated traumatic rib fractures: epidural analgesia over PCA or oral options

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Introduction

Rib fractures are the most common injury in blunt thoracic trauma. The prevalence is higher in the elderly secondary to mechanical or medical-evident related falls. Much of the risk is from pain-induced changes in breathing mechanics. There is a multitude of analgesic options available to assist with pain. Their prescription is haphazard at best and many patients require adjustment only after clinical deterioration in respiratory function.

Aims

Identification of prognostic indicators which may reduce mortality by early initiation of appropriate treatment in isolated traumatic rib fractures.

Methods

A retrospective analysis of 884 patients admitted with fractured ribs to a peripheral Brisbane Hospital was undertaken between May 2016 and August 2018. All isolated rib fracture injuries regardless of mechanism of injury were captured that required an overnight admission or more. 71 were eventually excluded as additional injuries or complication unrelated to the rib fracture was identified during their admissions.

Methods

A retrospective analysis of 170 non-variceal UGIB patients presenting over 18 months was undertaken. Patients requiring referral to tertiary centre were excluded leaving 154 cases examined. Demographics, and GESA criteria for urgent endoscopy was compared to actual performance of intervention and whether time of day affected intervention decision.

Results

Mortality and requirement of mechanical ventilation was low at less than 1% combined. 7% required an admission to high dependency unit for monitoring. The incidence of pneumonia was 11.1% requiring treatment whereas atelectasis was identified on 70% of their x-rays during admission. Logistical regression analysis demonstrated patients with epidural analgesia had a significantly better outcome ($p<0.001$) than PCA analgesia or oral analgesia. There was no significant difference between PCA and oral analgesia. Access to chest physiotherapy was associated with reduced hospital stay and analgesia requirement.
At a Brisbane peripheral hospital, general surgeons offer the on-call endoscopy service. In line with GESA guidelines, UGIB (or suspected) had evaluation within a 24-hour period. Low risk patients tended to be younger with inconsistent UGIB clinical presentation. There is a discrepancy in the indication for urgent endoscopy and practice. Older, co-morbid patients on anticoagulant or antiplatelets tended to be delayed whereas younger stable or stabilised patients had urgent endoscopy. The discrepancy with clinical requirement may be an inappropriate application of established guideline and use of resource.

Biography

Bawar Saeed is a General Surgery Registrar (trainee medical practitioner) for Queensland Health in Australia. He is a generally registered medical practitioner with the Australian Health Practitioner Regulation Agency (AHPRA). He has a Master in Traumatology specializing in Trauma Surgery from The University of Newcastle and Diploma of Surgical Sciences from Edinburgh University. He graduated from Bond University Australia with a MBBS and has been practicing and trained within Australian hospitals for the past 9 years with highly varied multidisciplinary hospital-based experience with 1.5 years as a Cardiothoracic Surgery Registrar and 3.5 years as a General SurgeryRegistrar.