

COMPARISON OF REGIONAL AND GENERAL ANAESTHESIA FOR INPATIENTS PRESENTING FOR HAND SURGERY

MACRAE, J., QURESHI, S., AZIZ, A.

DEPT ANAESTHETICS, JAMES COOK UNIVERSITY HOSPITAL, MIDDLESBROUGH

Introduction

- Previous studies have shown regional anaesthesia in hand surgery may confer benefits such as reduced post operative pain, nausea and vomiting, and post operative care unit use.
- However, the overall benefits of regional anaesthesia (RA) compared to general anaesthesia (GA) are not clearly established.
- We reviewed **length of stay (LOS)** and **post operative analgesic requirements** of patients undergoing GA or RA for hand surgery.

Methods

- We reviewed the case records of adult patients undergoing hand surgery in our department from Jan 2011 to Jan 2013.
- Data was collected retrospectively from case records using a standardised proforma.
- Data collected included patient demographics, type of surgery, anaesthetic technique, perioperative analgesic usage, including the use of strong oral opiates and IV opiates for breakthrough pain, and length of stay.
- Extended LOS was defined as a clearly delayed discharge and/or a stay >24h.
- Factors potentially related to an extended LOS were examined and categorised as either 'Anaesthetic' or 'Non-Anaesthetic'. Post operative nausea and vomiting, and post operative pain were classified as 'Anaesthetic factors'. Complex comorbidities and the need for physiotherapy or social planning were classed as 'Non Anaesthetic' factors.
- Data were compared using χ^2 tests.

Results

- 114 cases were identified of which 43 received GA and 71 RA.
- In 37 cases LOS was 'Extended'; 10/43 (23%) in the GA group and 27/71 (38%) in the RA group ($p = 0.10$)
- In the GA group, 4/10 (40%) of extended LOS decisions were fully or partly attributed to anaesthetic factors. In the RA group 4/27 (15%) LOS decisions were fully or partly attributed to anaesthetic factors ($p = 0.098$)
- In the GA group, 2/43 (4.7%) patients stayed >24h. Neither stay was due to anaesthetic factors. In the RA group, 7/71 (9.8%) patients stayed >24h. 2 (2.8%) of these cases were fully or partly attributed to anaesthetic factors. ($p = 0.37$)

- In the GA group, 5/43 (12%) patients required either strong oral opiates or IV morphine. In the RA group 6/71 (8.5%) required strong oral opiates. None of the RA patients required IV morphine ($p = 0.58$)
- There was one case of a failed block and one block was noted to be of "slow onset". There were no documented cases of serious adverse events related to anaesthesia.

LOS and Associated Factors



Discussion

- There were no significant differences in either LOS or analgesic requirements between the RA and GA groups. However, there was a trend in the RA group towards **decreased LOS** due to anaesthetic factors and **decreased IV opiate requirements**
- The use of rescue opiates was reassuringly low in both groups.
- A potential source of bias would be patient selection for each technique. The reasons for choosing either technique above the other were not clear but we speculate patients with multiple comorbidities and higher ASA status would be more likely to undergo RA. This may explain the higher proportion of extended LOS due to 'Non Anaesthetic' factors.
- With newer shorter acting anaesthetic agents and a multimodal anaesthetic approach, GA may offer similar benefits to RA without the inherent drawbacks.
- However, this was a small, retrospective, single centre study and a larger, multicentre RCT would be needed to clarify these trends.
- In addition, the patient's perception of their anaesthetic lies at the heart of our practice and further evaluation would be beneficial to appraise this.