

Same Day Discharge following Afternoon Arthroscopic Shoulder Surgery

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Abstract

Arthroscopic shoulder surgery with overnight admission is commonplace due to concerns about pain relief in the first 24 hours and perceived need for clinical and physiotherapy assessment after an anaesthetic block has worn off. With an aim to assess the safety and effectiveness of same day discharge for arthroscopic shoulder surgery done on afternoon lists, we retrospectively analysed 140 cases in a 27 month study period. All patients underwent surgery awake under regional anaesthesia. Patients were reviewed by our physiotherapist and discharged irrespective of return of motor and sensory function. There were no re-admissions during the study period and no overnight calls. Arthroscopic repair requiring post-operative immobilisation was performed in 44 (31%) cases (28 rotator cuff repair, 13 stabilisation and 3 long head of biceps tenodesis). The cost saving for this cohort of 140 cases compared with overnight admission was £56,000 (based on the NHS estimate of a £400 overnight bed stay). This study demonstrates that awake ambulatory arthroscopic shoulder surgery with regional anaesthesia and same day discharge is safe and efficient, even if surgery is performed in the afternoon with discharge into the evening.

Introduction

Arthroscopic shoulder surgery with overnight post-operative admission is commonplace, particularly for patients having repair procedures such as rotator cuff repair. This is often due to concerns about pain relief¹ and a requirement for clinical and physiotherapy assessment once the effect of an anaesthetic regional nerve block has worn off. Evidence also suggests the readmission rate is higher for those undergoing this type of surgery later in the day². In our unit, arthroscopic shoulder surgery patients including those having repair procedures are discharged the same day, even if performed on an afternoon list.

The aim of this study was to assess the safety and efficiency of same day discharge for arthroscopic shoulder surgery performed awake under regional anaesthesia on afternoon operating lists.

Methods

We performed a retrospective analysis of a prospectively collected database of all shoulder surgery done on afternoon operating lists in a single institution (Circle Nottingham NHS Treatment Centre) by the senior author over 27 months from October 2013. Patient electronic records and episode duration were gained from the trust NOTIS software. We analysed the type of operation, type of anaesthesia, duration of patient stay, incidence of readmission in the 24 hours following surgery and the incidence of emergency telephone advice sought in the 24 hours following surgery.

Results

140 arthroscopic shoulder surgeries were performed on afternoon operating lists during the study period. Arthroscopic repair requiring post-operative immobilisation was performed in 44 (31%) cases (28 rotator cuff repair, 13 stabilisation and 3 long head of biceps tenodesis). All patients underwent surgery under regional anaesthesia and were either awake or received conscious sedation. All patients were discharged irrespective of return of motor and sensory function after being reviewed by a physiotherapist. All patients were discharged with multimodal analgesia to take when the regional block wore off. The analgesia regimen used consisted of regular paracetamol, a regular non-steroidal anti-inflammatory and either dihydrocodeine or oral morphine as required. They were given an advice sheet and contact details in case of any concerns or an emergency. During the study period, there were no re-admissions and no overnight calls to our physiotherapist.

The mean episode duration from admission to discharge was 4hrs 30mins. The cost saving for this cohort of 140 cases compared with overnight admission was £56,000 (based on the NHS estimate of a £400 overnight bed stay).

Discussion

There has been an exponential growth in the volume of arthroscopic shoulder surgery and various anaesthetic techniques have been utilised to provide effective anaesthesia and post-operative analgesia. The Interscalene Block has emerged as the most effective anaesthetic technique for shoulder surgery³ and is widely employed as the anaesthetic of choice in various centres in the UK⁴.

Saeed et al published that the time of surgery is a significant risk factor in predicting overnight admission to hospital following daycase arthroscopic shoulder surgery². Majority of patients in this study group had a general anaesthetic (GA) with local infiltration around the arthroscopy portals and into the shoulder joint. Post-operative pain (62.1%) and poor recovery from GA (27.6%) were cited to be the two most common reasons of delayed discharge. Patients undergoing arthroscopic shoulder repair on afternoon operating lists under regional anaesthesia have previously been admitted overnight due to concerns about pain relief and the need for assessment after the block has worn off, especially for those undergoing repair procedures requiring limb immobilisation.

This study demonstrates that awake ambulatory arthroscopic shoulder surgery with regional anaesthesia and same day discharge does not lead to readmissions, even if surgery is performed in the afternoon, with discharge into the evening.

We believe that the factors which contribute to successful daycase ambulatory shoulder repair surgery service are:

- Regional anaesthesia performed awake or with conscious sedation.
- An appropriate take home analgesia regimen.
- Early physiotherapy assessment and advice prior to discharge from hospital.
- Comprehensive patient information delivered in person and reinforced with a take home advice leaflet.

References

1. Day-Case Surgery: Anesthetic Challenges. Kathryn E McGoldrick. Ambulatory Surgery. 2012; 17(3): 47–49.
2. Does the time of day-case shoulder arthroscopic surgery influence the rate of unplanned admissions? Saeed Z, Radwan R, Trickett R, Pullen H. The Journal of One-Day Surgery. 2014; 24(4): 100–102.
3. Current Concepts in Anaesthesia for Shoulder Surgery. Sulaiman L, MacFarlane RJ, Waseem M. Open Orthop J. 2013; 7: 323–328.
4. Setting up an upper limb regional anaesthesia service for day surgery – a practical guide. www.daysurgeryuk.net/handbooks.