# Patients' Preference of Anaesthesia During Herniorrhaphy

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## ABSTRACT

**Objectives:** To study the type of anaesthesia, local or general, that patients prefer for an open hernia repair procedure and the reason for their choices.

**Patients and methods:** This study was conducted at Royal Medical Services during the period between January 2011 and June 2013. A sample of 150 consecutive patients awaiting open hernia repair and considered suitable for day case surgery, under local or general anaesthesia were chosen according to the following criteria: age between 20 and 75 years; primary hernia repair (irreducible or complicated hernias were excluded). The patients were interviewed at the hospital. The questionnaire ascertained the patients' willingness to have day case hernia repairs under local or general anaesthesia, the reasons for their choice and any previous experience of these procedures.

**Results:** The mean age of patients was 58.4 years with 114 males and 36 females. Hernia types were 98 inguinal, 30 paraumbilical, 12 small incisional and 10 femoral.

87% of patients preferred day case hernia repair and these patients were younger in age in comparison to those opting for in-patient surgery. 13% of patients expressed a strong preference for general anaesthesia, all of whom also stated 'a dislike or feeling of anxiety if awake during surgery'. The reasons stated for choosing local anaesthesia included, 'dislike/fear of loss of consciousness with GA' (75%), previous adverse experiences with surgery under general anaesthesia (8%) and slower post-operative recovery with general anaesthesia (4%).

**Conclusion:** The majority of patients preferred local anaesthesia for their hernia repair procedure; the mean reason was dislike of loss of consciousness with general anaesthesia.

**Key words:** Hernia, local anaesthesia, general anaesthesia, in-patient and day case.

## Introduction

In selected patients, day case herniorrhaphy has a similar clinical outcome but is more economical than in-patient care. Herniorrhaphy may be performed under local or general anaesthesia. General anaesthesia requires an anaesthetist and greater post-operative nursing care. Use of local anaesthesia compared with regional or general anaesthesia results in a shorter duration of hospital admission and less postoperative pain, as well as fewer micturition difficulties, in patients undergoing hernia repair(1).

Day case herniorrhaphy under local anaesthesia is more economical, but of similar clinical outcome compared to in-patient care(2,3). It is therefore likely to ease the current pressures on finances and in-patient beds without detrimental effects on patient care. Despite the advantages of day case surgery it is not fully exploited in many hospitals. This is in part due to a lack of enthusiasm and adequate facilities(3). In this respect, patient preference for day case hernia repair is also likely to be important. We report our findings on patient willingness to undergo day case hernia surgery under local or general anaesthesia.

## Patients and Methods

This study was conducted in Royal Medical Services during the period between January 2011 and June 2013. A sample of 150 consecutive patients awaiting open hernia repair and considered suitable for day case surgery, under local or general anaesthesia were chosen according to the following criteria: age between 20 and 75 years; primary hernia repair (irreducible or complicated hernias were excluded).

The patients were interviewed at the hospital. The procedures for day case or in-patient hernia repairs were explained as follows: Provided there are no complications the patient will be discharged the same day or the following day; herniorrhaphy involves the same type of repair and overall, the post-operative discomfort, size of scar, complication and recurrence rates are similar; earlier mobilisation may be possible with local anaesthesia; the patient is awake under local anaesthesia, although they are unlikely to feel any pain, need not to see the operation itself and may choose to have light sedation. The questionnaire ascertained the patients' willingness to have day case hernia repairs under local or general anaesthesia, the reasons for their choice and any previous experience of these procedures.

## Results

The mean age of patients was 58.4 years with 114 males and 36 females. Hernia types were 98 inguinal (65%), 30 paraumbilical (20%), 12 small incisional (8%) and 10 femoral (7%).

Thirty-six (24%) patients had previous hernia repairs (95% of which were under general anaesthesia). There was a negative association between previous hernia repair and preference for day case surgery. Sixty-four (43%) patients had previous experience of day case surgery and 38 (25%) knew of others who had had day case surgery. There was a tendency for a positive association between previous experience with day case surgery and a preference for day case surgery.

87% of patients preferred day case hernia repair and these patients were younger in age in comparison to those opting for in-patient surgery. 13% of patients expressed a strong preference for general anaesthesia, all of whom also stated 'a dislike or feeling of anxiety if awake during surgery'. The reasons stated for choosing local anaesthesia included, 'dislike/fear of loss of consciousness with GA' (75%), previous adverse experiences with surgery under general anaesthesia (8%) and slower post-operative recovery with general anaesthesia (4%). Fourteen (9%) and twelve (16%) patients had previous adverse experiences with surgery under local and general anaesthesia respectively. There was a positive association between previous adverse experiences with surgery under local anaesthesia and a preference for general anaesthesia. There were no other associations between the parameters studied.

## Discussion

We observed that when allowed to make an informed choice, the vast majority of patients prefer day case hernia repair. This bodes well for the future of day case herniorrhaphy. A small minority of patients preferred 'in-patient surgery' and these patients were older and had previous herniorrhaphy, with adverse experiences from this in some cases.

There was a greater preference for general anaesthesia as the mode of anaesthesia, partly due to previous unfavourable experiences with local anaesthesia and an assumed feeling of anxiety if awake during the operation. A significant proportion of the patients of the local anaesthesia group experience discomfort and anxiety, although this is mild and acceptable to most patients(3). A greater preference for general anaesthesia has important resource implications, since this requires the services of an anaesthetist and increased nursing care in the immediate recovery stage. In contrast, for herniorrhaphy under local anaesthesia it is recommended that the patient be monitored intra-operatively by an anaesthetic nurse and that an anaesthetist should be available if conversion to general anaesthesia becomes necessary(2).

With a careful technique, local anaesthesia causes minimal physiological disturbance. This may be particularly useful for patients with cardiovascular or respiratory disease for whom there may be advantages in avoiding a general anaesthetic. The absence of postoperative sedation or drowsiness allows early ambulation and diminishes the requirement for recovery facilities. Local anaesthesia provides postoperative analgesia for up to four hours and may be administered by the surgeon. When adrenaline is mixed with the local anaesthetic (normally in a dilution of 1:200,000) useful vasoconstriction is produced resulting in a relatively bloodless field. On the other side, surgery on the awake patient under local anaesthesia must be carried out gently. Although pain sensation is usually blocked by the anaesthetic, traction on certain tissues, particularly the peritoneum is uncomfortable. The patient should be warned that some sensation may be experienced during the operation but that it will not be painful. Larger hernias, particularly those with incarcerated bowel may prove unsuitable for local anaesthesia. Some sedation during the operation may be required for anxious patients which loses some of the benefits of avoiding general anaesthesia. Patients who are excessively nervous may be unsuitable for surgery under local anaesthesia(4).

We are unaware of similar pre-operative studies investigating patient preference for day case hernia repair under local or general anaesthesia. Uncontrolled follow-up studies and a limited number of randomised clinical trials comparing day case herniorrhaphy under local and general have reported high rates of patient satisfaction post-operatively(5-7). However, in these studies, as in most busy surgical out-patient clinics, the patients are not routinely offered an informed choice of anaesthesia. The choice of anaesthetic is often influenced by the facilities available within the day case surgical unit and the personal preferences of the surgeon.

General anaesthesia is still the preferred mode of anaesthesia for complicated hernias and uncooperative and highly anxious patients. Local anaesthesia is desirable for those who are at high risk of morbidity from general anaesthesia. But, for a majority of patients awaiting hernia repair, day case surgery under general and local anaesthesia is feasible, although herniorrhaphy under local anaesthesia makes greater economic sense(8-12). Specific measures to create a more patient friendly atmosphere in the theatre, such as greater explanation, reassurance to the patient during the operation and music in theatre may help to counter the feelings of anxiety and enable greater acceptability of local anaesthesia.

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