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Day case hernia repair under local versus general anaesthesia: patient preferences

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Abstract

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 (LA) or general anaesthesia (GA). GA requires an anaesthetist and greater post-operative nursing care. A survey of 75 patients awaiting open hernia repair revealed that when allowed to make an 'informed choice', 91% of patients who were fit for GA or LA preferred day case surgery. Whilst 20% did not express a preference for the type of anaesthesia, 33% had a strong preference for LA and 47% for GA. Preference for GA was associated with previous adverse experiences with LA and an assumed feeling of anxiety if awake during surgery. Measures are needed to improve patient acceptability of day case hernia repair, especially under LA, which makes clinical and economic sense. © 1998 Elsevier Science B.V. All rights reserved.

Keywords: Hernia repair; Day case surgery; Local anaesthesia; General anaesthesia and patient views

1. Introduction

Day case herniorrhaphy under local (LA) or general anaesthesia (GA) is more economical, but of similar clinical outcome compared to in-patient care [1,2]. It is therefore likely to ease the current pressures on finances and in-patient beds in the NHS 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 [2]. 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 LA or GA.

2. Patients and methods

A sample of 75 consecutive patients awaiting open hernia repair in 1997 and considered suitable for day case surgery, under LA or GA were chosen according to the following criteria: age between 20 and 75 years; American Society of Anesthesiologists classification I or II; primary hernia repair (irreducible or complicated hernias were excluded); and a responsible adult available to supervise patient on return home.

The patients were interviewed by one of the authors at the hospital and by telephone at home, to complete a 2-page questionnaire. Informed consent was obtained. The procedures for day case or in-patient hernia repairs, under LA or GA were explained as follows: provided there are no complications the patient will be discharged the same day (day case) or the following day (in-patient surgery); herniorrhaphy under LA or GA involves the same type of repair and overall, the post-operative discomfort, size of scar, complication and

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Table 1
Patient preference for day case hernia repair and type of anaesthesia

	Preference for day case surgery		Anaesthetic preference		
	Yes	No	GA	LA	Either
N (% study sample)	68 (91)	7 (9)	35 (47)	25 (33)	15 (20)
Age (mean+S.E.M.)[a]	56 ± 2	66 ± 3*	54 ± 3	60 ± 2	58 ± 4
Social class (median) (% group)[b]	III (57)	III (53)	III (56)	III (46)	10 (67)
Employed (% group)[b]	26 (38)	3 (43)	11 (31)	11 (44)	7 (47)
Previous hernia repair (% group)[b]	14 (21)	4 (57)*	8 (23)	7 (28)	3 (20)
Previous day case surgery (% group)[b]	31 (46)	1 (14)	14 (40)	14 (56)	4 (27)
Previous adverse experience with surgery under LA (% group)[b]	—	—	7 (20)§	0 (0)	0 (o)
Previous adverse experience with surgery under GA (% group)[b]	—	—	4 (11)	6 (24)	2 (13)

[a] Student's t-test or one way ANOVA.
[b] χ^2 test.
* $P<0.05$ vs. patients preferring day case surgery; § $P<0.01$ vs. patients preferring LA or 'either' type of anaesthesia.

recurrence rates are similar [1,3]; earlier mobilisation may be possible with LA [1,3]; the patient is awake under LA, although they are unlikely to feel any pain, need not see the operation itself and may choose to have light sedation. The questionnaire ascertained the patients' willingness to have day case hernia repairs under LA or GA, the reasons for their choice and any previous experience of these procedures.

3. Results

All 75 patients approached, agreed to take part. There were 57 (76%) males and 18 (24%) females, with a mean age of 57 ± 2 years (range 21–75). Hernia types were 49 (65%) inguinal, 15 (20%) paraumbilical, 6 (8%) small incisional and 5 (7%) femoral.

The majority (91%) preferred day case hernia repair and these patients were younger in age in comparison to those opting for in-patient surgery ($t = 2.7$; d.f. $= 73$; $P < 0.05$; Table 1). Of the 9% unwilling to undergo day case surgery, 6% preferred to be discharged when fully recovered and 3% preferred an in-patient stay, due to adverse experiences following previous hernia repairs. Eighteen (24%) patients had previous hernia repairs (all under GA and only 2.7% as day cases). There was a negative association between previous hernia repair and preference for day case surgery ($\chi^2 = 4\ 7$; d.f. $= 1$; $P < 0.05$). Thirty-two (43%) patients had previous experience of day case surgery and 19 (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 ($\chi^2 = 2.5$; d.f. $= 1$; $P = 0.1$).

Thirty-five (47%) patients expressed a strong preference for GA, all of whom also stated 'a dislike or feeling of anxiety if awake during surgery' (Table 1). The reasons stated for choosing LA (33%) included, 'dislike/fear of loss of consciousness with GA' (16%), previous adverse experiences with surgery under GA (8%) and slower post-operative recovery with GA (4%). Seven (9%) and 12 (16%) patients had previous adverse experiences with surgery under LA and GA, respectively. There was a positive association between previous adverse experiences with surgery under LA and a preference for GA ($\chi^2 = 8.8$; d.f. $= 2$; $P < 0.01$). There were no other associations between the parameters studied.

4. 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 GA as the mode of anaesthesia, partly due to previous unfavourable experiences with LA and an assumed feeling of anxiety if awake during the operation. A significant proportion of the patients undergoing herniorrhaphy with LA experience discomfort and anxiety (38–83%), although this is mild and acceptable to most patients [3]. A greater preference for GA has important resource implications, since this requires the services of an anaesthetist and increased nursing care in the immediate recovery stage [1,3]. In contrast, for herniorrhaphy under LA it is recommended that the patient be monitored intra-operatively by an anaesthetic nurse and that an anaesthetist should be available if conversion to GA becomes necessary [1].

We are unaware of similar pre-operative studies investigating patient preference for day case hernia repair

under LA or GA. Uncontrolled follow-up studies and a limited number of randomised clinical trials comparing day case herniorrhaphy under LA and GA have reported high rates of patient satisfaction post-operatively [3–5]. 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.

GA is still the preferred mode of anaesthesia for complicated hernias and uncooperative and highly anxious patients. LA is desirable for those who are at high risk of morbidity from GA. But, for a majority of patients awaiting hernia repair, day case surgery under GA and LA is feasible, although herniorrhaphy under LA makes greater economic sense. 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 LA.

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