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J. of Ambulatory Surgery 10 (2002) 17–19

Ambulatory Surgery

www.elsevier.com/locate/ambsur

Postoperative outcomes in ambulatory surgery Are they the same, worse or better?

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Received 1 January 2002; accepted 19 July 2002

Abstract

Background: Many authors have claimed that ambulatory surgery results in less wound infections although there is little good evidence for this. *Objective:* To obtain evidence of the influence of ambulatory surgery on the postoperative results in groin hernia surgery. *Method:* Patients undergoing elective hernia repair were included. Hematoma, wound infection and recurrence rates were analysed. Two hundred and twenty-three ambulatory and 71 inpatient procedures were studied. *Results:* The morbidity rate was 11% in ambulatory patients and 21% in inpatients and the recurrence rate 5.5 and 12.5%, respectively. *Conclusion:* Ambulatory surgery does not increase the postoperative morbidity or recurrence rates in groin hernia surgery.

Keywords: Wound infection; Ambulatory surgery; Ambulatory outcome

1. Introduction

Many have claimed that ambulatory surgery results in less wound infections compared with inpatient treatment although there is little good evidence for this.

It should be understood that once ambulatory surgery programmes pass the implementation stage it is almost impossible to be able to carry out research with a higher evidence level, as a control group of patients will not be available for comparison. Outcomes will also be affected by the type of Ambulatory Surgery Unit—an integrated hospital unit is not the same as a Freestanding unit.

2. Objective

To obtain evidence of the influence of ambulatory surgery on postoperative results in groin hernia surgery.

3. Method

In a 19-month period we carried out a retrospective study of groin hernia repairs undertaken in a hospital based ambulatory surgery unit. Only the postoperative recovery room and ward area were specific to ambulatory surgery patients.

Patients undergoing elective repair for either primary or recurrent inguinal or femoral hernias between August 1996 and March 1998 were included.

A modified Bassini technique was used either under spinal or epidural anaesthesia. No patient received preoperative antibiotics.

Analysis for postoperative hematomata and wound infection was undertaken on the 13th postoperative day. Patients were checked for recurrence from 1 month postoperatively onwards.

We excluded all patients that failed to attend postoperatively as well as those lost to long term follow up. In order to minimise the risk of analytical error patients were excluded if there were surgical procedure problems, per-operative complications, postoperative pain, etc. Inpatient treatment was undertaken when patients

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0966-6532/02/$ - see front matter
PII: S0966-6532(02)00023-9

requested this, when they lived alone or when they lived a long distance from the ambulatory surgery unit.

We define ambulatory surgery as surgery where the patient is admitted, operated on and discharged on the same working day.

The diagnosis of infection was clinical and it was made by recognising Celcius' signs or pus drainage from the wound.

Follow up for recurrence was made by direct medical examination or phone control.

The data was analysed in two non-comparative groups: outpatients and inpatients.

4. Results

Between 01-08-96 and 28-02-98 361 groin hernia repairs were performed. There were 238 (66%) ambulatory and 123 inpatient procedures (see Table 1).

Were excluded 23 cases that were lost to follow up: 15 of outpatient's group and eight of inpatient's group. Forty-four further inpatients were excluded as there were surgical procedure problems. Thus we analysed two groups: (A) 223 outpatients; and (B) 71 inpatients (see Table 2).

Postoperative morbidity was 11% (25/223) in outpatients and 21% (15/71) in inpatients (see Table 3).

There was no mortality.

Follow up was similar in both A and B groups with a overall recurrence rate of 7–5.5% in group A and 12.5% in group B (see Table 4).

5. Discussion

The demographic data is similar in both groups but they are not comparable because of the retrospective nature of the research. For this reason we did not look to see if the data was statistically significant.

Morbidity and recurrence rates are similar to international reports [1–3]. Results vary between the groups but appear best for the ambulatory surgery group. It is not easy to explain but hematomata and recurrences have a direct relationship with the quality of the surgical technique and not to the ambulatory modality itself.

Wound infections were the same in both groups, but there are reports that refer to a lower rate in ambulatory patients therein short stay and other settings [4,5].

The evidence supports a real benefit for patients from ambulatory surgery and supports its continuance.

Table 1
Procedures

	Ambulatory ($N = 238$)	Inpatient ($N = 123$)
Inguinal hernioplasty	192 (80.5%)	88 (71.5%)
Bilateral inguinal hernioplasty	24 (10%)	26 (21%)
Hernioplasty in recurrent hernia	14 (6%)	7 (6%)
Femoral hernioplasty	6 (2.5%)	–
Inguinal hernioplasty + hydrocelectomy	2 (1%)	2 (1.5%)

Table 2
Demographic data

	Outpatients ($N = 223$)	Inpatients ($N = 71$)
Average age	67 years (range 20–88)	63 years (range 23–87)
Gender	Male 85% Female 15%	Male 83.5% Female 16.5%
ASA	ASA I 39.5% ASA II 51% ASA III 9.5%	ASA I 38% ASA II 52% ASA III 10%

Table 3
Morbidity

	Outpatients ($N = 223$)	Inpatients ($N = 71$)
Hematomas	10% (22)	20% (14)
Wound infections	1.5% (3)	1.5% (1)
Morbidity	11% (25/223)	21% (15/71)
General morbidity	13.5% (40/294)	

Table 4
Follow up and recurrence

	Outpatients ($N = 223$)	Inpatients ($N = 71$)
Follow up	26 months (range 1–50)	27 months (range 1–48)
Recurrence	12 cases (5.5%)	9 cases (12.5%)
Overall recurrence	7% (21/294)	

6. Conclusion

The study suggests that ambulatory surgery does not increase the immediate postoperative morbidity or recurrence rates in groin hernia surgery.

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