

Patient evaluation of routines in ambulatory hernia surgery

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Abstract

In order to make more effective use of clinical resources, the routines concerning ambulatory hernia surgery were altered in our department. Based on the information from the referring physician, patients not older than 75 years were elected for surgery without pre- or post operative consultations. A questionnaire, rating satisfaction using a five-step analogue scale, was sent to 169 patients (response rate 91%) subjected to ambulatory surgery during 1992–93, of which 76% had been accepted without a preoperative consultation. The mean patient wish for a preoperative consultation was 2.5, largely independent of age and distance to the hospital. Eighty two percent of the patients rated their satisfaction with the operative result to '4' or '5', significantly correlating the satisfaction with the information given. We conclude that, on condition that the communication with the general physician is good, it is possible to admit 75% of the patients to ambulatory surgery without a preoperative consultation. Although our patients received written information, many of them expressed a wish for hospital consultations. In addition, the present results also highlight the importance of adequate patient information in ambulatory surgery.

Keywords: Ambulatory surgery; Inguinal hernia repair; Patient satisfaction; Visual analogous scale

1. Introduction

In the last few decades, cost-effectiveness has become a factor of growing importance in health care planning. To achieve that goal, an increasing part of surgery is performed in ambulatory practice. Since hernia surgery is one of the most common operations in general surgery [1], changes in the outcome of, and routines concerning, this operation will significantly influence health cost. Cost-effectiveness in response to outcome has been analyzed by several authors [2–4]. Furthermore, a number of studies [5–9] have indicated that hernia repair in ambulatory practice is cost-effective, appreciated by the patients, and does not lead to higher recurrence frequencies.

The omission of pre- and postoperative consultations, to further increase cost-effectiveness, is not yet

common practice. Few, if any, studies have been published regarding the outcome of, and patient satisfaction with, such simplified routines in the case of ambulatory hernia surgery. This study consists of an evaluation of 169 cases, in which 76% of the patients were operated without pre- or postoperative consultations.

2. Methods

2.1. Routines

Patients aged under 75 years were elected for ambulatory surgery without preoperative consultation, provided that the referring physician clearly stated that the patient suffered from a hernia causing symptoms, and no contraindications were present. The hospital's admittance area is widespread, and 42% of the patients lived at a distance of more than 50 km (10% more than 100 km) from the hospital.

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All patients were offered surgery within 3 months from referral. A letter was sent to the patients 2–3 weeks in advance which included the date of the planned operation and information concerning the operative routines. The day before, patients were contacted by telephone, as a reconfirmation and to inform about the scheduled time of the operation. Before the operation, each patient was examined by the surgeon to confirm the diagnosis. Patients operated in the morning were discharged in the afternoon, while patients operated in the afternoon were offered the option of staying until the following morning. When discharged, the patients were given written information and NSAID analgesics for 3–5 days.

2.2. Evaluation

Patient satisfaction questionnaires were sent by mail to all living patients subjected to ambulatory hernia surgery at Mora Hospital during 1992–93. The 169 patients were aged from 18 to 75 years (mean age 55) and they constituted 52% of the total number of inguinal hernia operations at our hospital that year. A reminding letter with the same content was sent to patients who had not responded within 2–3 weeks.

Patient satisfaction was estimated using a five step analogue or rating scale, where '1' was clearly 'no' and '5' was clearly 'yes', and thus '3' was the middle point of the scale. The questionnaire consisted of 14 questions, of which nine (listed in Table 1) were answered using this scale. Two of the questions were answered by 'yes' or 'no' (wish for ambulatory surgery in case of the need for another operation and possibility to leave hospital as planned). Time of sick-leave was estimated in weeks. Furthermore, age and distance to the hospital were divided into four groups each (< 35, 35–50, 50–65, > 65 years and 0–30, 31–50, 51–99, > 100, km respectively).

Table 1

Mean patient satisfaction ratings of factors asked about on the five step analogous scale

| Factor | Satisfaction rating (mean) |
|--|----------------------------|
| Wish for preoperative consultation | 2.5 |
| Wish for postoperative consultation | 2.7 |
| Preoperative information | 4.2 |
| Postoperative information | 3.8 |
| Preoperative analgesia | 4.8 |
| Postoperative analgesia | 4.3 |
| Analgetics for use at home | 4.2 |
| Healing problems with operative incision | 1.7 |
| Operative result | 4.4 |

The rating '1' is clearly 'no' and '5' is clearly 'yes'.

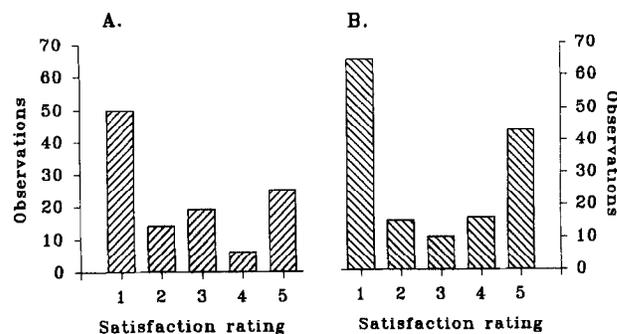


Fig. 1. Distribution of patient satisfaction ratings of wish for a pre- (A) and post- (B) operative consultation, respectively.

Mean values were used to rate the satisfaction or opinion of the patient population. Correlation between variables was estimated using Pearson's test for linear regression (continuous variables).

3. Results

Based upon referral information, 76% of the patients could be accepted for surgery without a preoperative consultation, while the remaining 24% were subjected to a preoperative hospital consultation in order to confirm the diagnosis. In no case was a planned operation cancelled. The immediate response rate to the questionnaire was 78% and another 13% responded after the reminder (total response rate 91%). There was no significant difference regarding age, sex or distance to the hospital between responding and nonresponding patients.

Table 2

Correlation coefficients, coefficients of determination and possibility rates against satisfaction with the operative result (Pearson's linear correlation test for continuous variables)

| Factor | $r(X,Y)$ | r^2 | Correlation |
|--|----------|-------|-------------|
| Wish for preoperative consultation | 0.18 | 0.03 | N.S. |
| Wish for postoperative consultation | -0.20 | 0.04 | N.S. |
| Preoperative information | 0.34 | 0.12 | $P < 0.001$ |
| Postoperative information | 0.52 | 0.27 | $P < 0.001$ |
| Postoperative analgesia | 0.20 | 0.04 | N.S. |
| Analgetics for use at home | 0.32 | 0.1 | $P < 0.01$ |
| Healing of operative incision | -0.02 | 0.00 | N.S. |
| Time of sick listing | -0.06 | 0.00 | N.S. |
| Age | 0.15 | 0.02 | N.S. |
| Distance to hospital | -0.12 | 0.01 | N.S. |
| Choose ambulatory surg. another time | -0.04 | 0.00 | N.S. |
| Possibility to leave hospital as planned | -0.23 | 0.05 | $P < 0.05$ |

Mean satisfaction ratings of factors asked about in the questionnaire are shown in Table 1. The patient wish for both a pre- and postoperative consultation (Fig. 1) was clearly detectable. There was an inverse correlation between the wish for a preoperative consultation and distance to the hospital ($P < 0.05$), independent of age. Nevertheless, 82% of the patients rated their satisfaction with the operative result at '4' or '5'.

The satisfaction with the operative result was correlated with a number of factors as shown listed in Table 2. The overall satisfaction with the operation was clearly correlated with satisfaction with pre- and postoperative information, whereas most of the other factors listed, among them wound healing, were not significant. Furthermore, the rated satisfaction with the pre-operative information was significantly higher than that of the postoperative information ($P < 0.05$).

4. Discussion

The aim of the present study was to evaluate patient satisfaction with new and simplified routines in ambulatory hernia surgery. The reason for changing routines was to optimize cost-effectiveness in ambulatory surgery and facilitate treatment for patients living in countryside areas who had long travel distances to the hospital.

Recently, the cost-effectiveness in a larger population, including the present patients, has been investigated in response to technical factors of the operation (i.e. type of hernia, operation or technique used) and recurrence frequency [2]. Cost effectiveness in hernia surgery has also been discussed in regard to the surgeon's degree of specialization [10]. The present study indicates a new way to make hernia surgery more cost-effective.

Patient ratings with five-point scales have been proven useful in the evaluation of patient satisfaction in outpatient practice and health plans [11], and for comparing the quality of patient-physician contact among residents [12]. The present scale was modified in that the earlier used EVGFP (excellent, very good, good, fair, poor) scale was replaced by a five-degree analogue one. However, the number of ratings in this study is, according to the earlier investigations, large enough for giving a good measure of patient satisfaction [11].

Furthermore, the present response frequency is comparable to earlier questionnaire investigations of operated Swedish inguinal hernia patients [13].

Satisfaction with the operative result correlated strongly with satisfaction with the information given but not to wound healing or to a wish for ambulatory surgery in case of another operation. This suggests the possibility of increasing the patients satisfaction by optimizing pre- and postoperative information. It is also possible, although not evaluated here, that the importance of information is greater with the simplified rou-

tines used in this study. Many of the patients expressed a wish for pre- and postoperative consultation at the hospital, which was largely independent of age and distance to the hospital. However, as shown in Table 2, this did not correlate with their satisfaction with the operative result and might, therefore, be of fairly low importance for the quality of the overall experience.

Furthermore, the provision of analgesics for use at home has been pointed out as a crucial factor for satisfaction in ambulatory surgery, but was uncorrelated with satisfaction with the new routines described here.

In conclusion, it is possible to increase cost-effectiveness in ambulatory hernia surgery by decreasing the number of pre- and postoperative hospital consultations, without detectable effects on the overall satisfaction with the operative result. Thus, three-fourths of the patients can be accepted directly to ambulatory surgery, provided there is a well-functioning cooperation with the referring physician. Furthermore, patient information is pointed out as an important part of the quality assessment in ambulatory practice.

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