

# Quality Of Life In Patients Who Refuse Surgical Repair Of Inguinal Hernia

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## Abstract

**Introduction:** Avoidance of inguinal hernia repair is a common phenomenon in everyday clinical practice especially in cases of elderly patients with comorbidities. However, the characteristics of such patients that can affect their quality of life have never been studied before, a knowledge that can be useful in clinical practise and trials design.

**Materials and methods:** Age, ASA score, the results of Sort-Form Health Survey 36 and Visual Analog Scales for pain and general discomfort for every male patient with inguinal hernia presented at our outpatient clinic were gathered during a 12 month period. Patients were divided into two groups: those who were treated with hernioplasty (n=65) and those who preferred watchful waiting (n=18). Then patients of the two groups were matched according to age and the results of visual analog scale of pain.

**Results:** Patients who have been operated were younger ( $P=0.003$ ) and reported worse results for pain ( $P=0.03$ ), discomfort ( $P=0.025$ ) and physical state. ( $P=0.05$ ) However, when adjustments have been made for pain and age the only statistically important difference was at social role, with those who accepted a surgical repair reporting better results ( $P=0.02$ ).

**Conclusions:** General health status is an important consideration in hernia surgery since it can affect both physical and social functioning. Moreover, it seems that social drive is an important factor in decision-making regarding hernia repair.

## INTRODUCTION

There is insufficient data on whether surgical repair is appropriate for all inguinal hernias [1,2,3]. High ASA score or increased age have been reported to be a relative contraindication for surgery in cases of asymptomatic inguinal hernias. Moreover, the results of randomized clinical trials which look into the quality of patients' life up to a year after hernia repair indicate that one third of patients show no improvement in these parameters after their operation. In addition to this, there is an up to 30% possibility of long-term complications such as chronic groin pain for one or two years after operation, recurrence of the hernia and others [4,5,6]. As a result, the wish of some patients to avoid surgery is an acceptable and respectable option especially in cases of elderly patients with comorbidities. Unfortunately, the evidence base on the non surgical aspects of management is of poor methodological quality [7,8] and only very recently a randomized controlled trial assessing whether deferring surgical repair is a safe and acceptable option has been published [9]. Still the various

psychological, sociological, demographic and physical characteristics of patients who prefer to avoid surgical repair have not been studied extensively.

A well validated generic tool which can be used for the above purpose is the Short Form 36 (SF-36) health survey [9,10,11,12,13,14,15]. This instrument allows comparisons in broad domains such as physical, mental and social and it can be used in combination with a disease specific questionnaire since it cannot focus on the problems of a specific condition.

## MATERIALS AND METHODS

Data was gathered prospectively from June 2004 to January 2006. Every male patient with non-incarcerated inguinal hernia presenting at the outpatient surgical clinic during this period was included in this study. Surgeons explained that a surgical repair is recommended but there is insufficient data especially for patients with minimal symptoms and comorbidities whether they can benefit from an operation. Patients were divided into two categories depending on their wish to be operated; those who preferred watchful waiting

and those who wanted surgical repair. Patients, who wanted to rethink and have not been operated or scheduled for an operation 4 months after the initial visit, were considered as belonging in the first group (avoiders). Patients who have avoided operation but have not completed the “4 months cut off point” were excluded from the study.

Every patient was asked to complete the SF-36 (methods of administration were either self completion or interview). Visual analog scales (VAS) of pain and discomfort were administrated as a disease specific questionnaire. Discomfort is a more general term than pain and as such is regarded the degree hernia affects life. Information regarding age and ASA score was also collected.

Responses to SF-36 questions are divided into 8 “dimensions” or domains. These are: physical function, pain, global health (general health perceptions), physical role, vitality, social role, emotional role, and mental health. The first four domains constitute the physical component of SF-36 and the rest the mental component. SF-36 components were calculated for the patients of each group and compared using student t test. (An analysis of normal distribution of all the components of SF-36 of every group was not carried out since previous data from trials using this instrument on several hundreds patients has shown that the results of SF-36 are of normal distribution.)

Furthermore, patients of the two groups were matched according to age and the results of visual analog scale of discomfort and a paired t test was performed to compare responses to SF-36. Matching was a two-step process with the visual analog scale's results for discomfort being the first variable to be used and age the second. Although both discomfort and age were discrimination factors between the two groups, matching was possible since 18 surgically treated patients were found with similar results of VAS for discomfort and ages similar to the “avoiders”. This can be seen in table 2 where mean age of the two groups does not differ significantly.

## RESULTS

Of the 85 male patients with inguinal hernia, 19 preferred not to be operated. One was excluded from the study because although he had accepted surgical treatment he had not been scheduled for an operation four months after the initial visit. Another patient, who preferred watchful waiting, denied answering the questionnaires. Age, ASA score, the results of SF-36 and VAS for pain and general discomfort for both groups can be seen on table 1. As it was expected,

the patients of the first group (who asked for an operation) scored worse both at visual analog scales and SF-36.

**Figure 1**

Table 1: Comparison between patients who were treated with hernioplasty and patients who avoided operation

	group 1	group 2	
	n=85	n=18	
age	63 SD=14	74 SD=12	<b>P=0.003</b>
ASA I	10	1	
ASA II	40	12	
ASA III	15	5	
VAS for pain	4,5 SD=2.2	3.2 SD=2	<b>P=0.03</b>
VAS for discomfort	6 SD=2	4,8 SD=1.8	<b>P=0.025</b>
SF-36 mental component	39 SD=11	38 SD=17	P=0.8
SF-36 physical component	29 SD=11	35 SD=13	<b>P=0.05</b>

group 1: patients treated with hernioplasty, group 2: patients who preferred watchful waiting, ASA: American Society of Anesthesiologists, VAS: visual analog scale. The forth column shows the statistically important results (bold numbers).

Table 2 shows the results for the domains of SF-36 after matching for discomfort and age has been made. The only statistical important difference can be found in the social function domain ( $p<0.05$ ).

**Figure 2**

Table 2: Comparison of the two groups after matching for discomfort and age has been made

	group 1	group 2	
	n=18	n=18	
age	69 SD=11	74 SD=12	0.2
physical function	20(12)	25 (9)	0.17
pain	41 (17)	39 (14)	0.7
vitality	35 (19)	41 (11)	0.25
social role	42 (17)	30 (12)	<b>0.02</b>
physical role	41 (9)	36 (14)	0.2
emotional role	47 (18)	36 (16)	0.06
global health	40 (12)	31(17)	0.075
mental health	43(19)	36(14)	0.22

group 1: patients treated with hernioplasty and matched according to the results of VAS for discomfort and age, group 2: patients who preferred watchful waiting. The forth column shows the statistically important results (numbers in bold)

## DISCUSSION

Surgeons and general practitioners play an important role in patients' decision as to whether they should be operated or not. Of course, other factors like financial, social and psychological ones can affect their decision, especially in cases like non- incarcerated asymptomatic inguinal hernia in patients with comorbidities, where treatment is controversial and doctors are unable to provide the evidence for the best treatment option.

As it was probably expected, the patients of the two groups do differ in various factors like age, physical and social functioning. An interesting fact is that when adjustment for discomfort and age is made, the only statistically important difference is social functioning. In contrast to what was expected, patients who preferred to be operated report a better social function. A hypothesis is that they prefer to be operated because they are afraid that their condition can

affect their social relationships. On the other hand, patients of the same age and mental status but of worse social function do not have that drive or they do not have the psychological support from their environment.

The relatively small number of patients who preferred not to be operated and the fact that more than one surgeon consulted the patients can be considered as limitation for the current study. Several hundreds of patients are required so that the multiple compounding variables can be addressed efficiently and in a meaningful manner. Thus, the differences found in this study should be regarded as hypothesis generating rather than hypothesis testing.

It is well known to psychologists that interpersonal relationships may have an important impact on decision-making and it seems that this is also incorporated in the case of surgical treatment of inguinal hernia. Surgeons who wish to persuade their patients to follow a treatment should not only provide the appropriate scientific information but also take into account factors like human environment. Finally, doctors should always have a holistic approach on their patients' problems and discuss their expectations. Informative discussions and individualization of cases can lead to the best decision even in cases where there is not enough scientific evidence.

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