

Brief Communication

Incidence of chronic groin pain after Lichtenstein hernia repair at the National Hospital Sri Lanka

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Key words: chronic groin pain, Lichtenstein hernia repair, severity of pain, activity restriction

Background

Chronic inguinal pain is the most common complication following inguinal hernia repair and it affects patient quality of life. This study aimed to find its incidence and how severely it affects day-to-day life in the Sri Lankan population.

Methods

100 patients were recruited to the study on admission for inguinal hernia repair to the National Hospital Sri Lanka and follow-up regarding pain was done at 6 months over the phone. We surveyed the incidence of pain, the severity of pain during day-to-day activities and how activities are limited due to chronic groin pain.

Results

Out of 100 initial participants, 75 patients completed 6-month follow-up. From 75 patients, 31 (41.3%) patients had chronic groin pain. No patients had severe pain at rest and only one (1.3%) had severe pain either during home chores or workplace activities. Mild pain at rest was seen in 4 (5.3%) and mild pain, either during home activities or workplace activities, in 21 (28%) of participants. Moderate groin pain at rest, at home activities and at workplace activities was seen in two (2.7%), two (2.7%) and one (1.3%), respectively. Of 75 participants at 6 months, only one (1.3%) had restricted home activities, seldomly. But three (4%) had seldom restrictions on leisure/religious activities and one (1.3%) had occasional restrictions. One (1.3%) had always restrictions on workplace activities and four (5.3%) had seldom restrictions.

Conclusions

The incidence of chronic inguinal pain after inguinal hernia repair in our study is similar to that found in the literature. However, there is a marked reduction in the effect of pain on day-to-day activities in our study. Which may be due to less severity of pain, good pain tolerance or poor health-seeking behaviour. This needs further evaluation to find out the exact cause for less reporting of the severity of pain and to improve health-seeking behaviour.

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Introduction

Inguinal hernia repair is one of the most performed surgeries worldwide with over 20 million performed each year. In the USA alone around 1 million inguinal hernia repairs are performed annually. Since the introduction of tension-free mesh repair in 1989 at the Lichtenstein clinic it has become the gold standard for inguinal hernia repair. Due to the marked reduction of recurrence rates after tension-free repair (0.2%), chronic groin pain has become the most common complication.

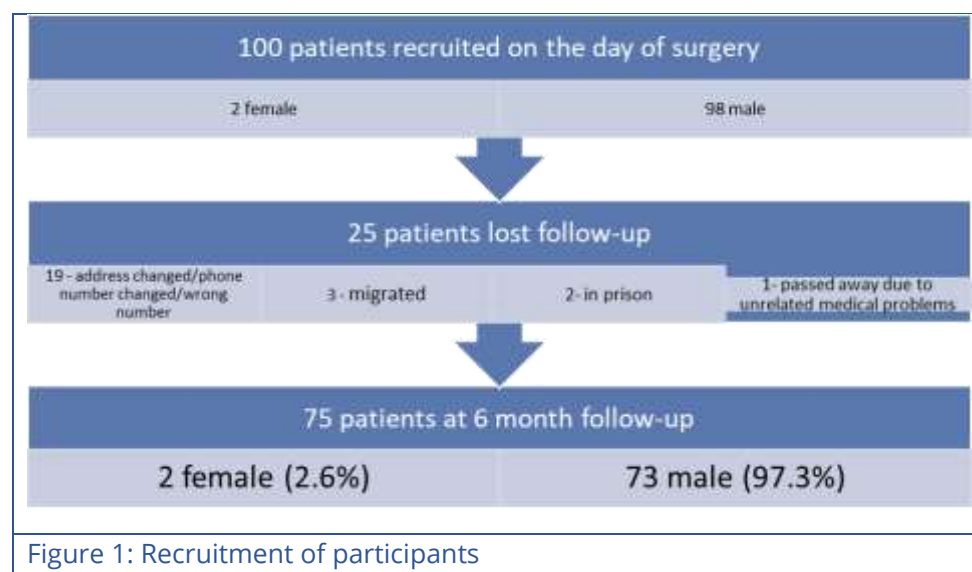
Chronic groin pain (inguinodynia) has a reported incidence of 0-62% with 2-4% developing severe pain. Limited Sri Lankan data are available on chronic groin pain after inguinal hernia repair, and we rely on Western data that might not represent our patients.

Methods

This was a prospective cohort study to identify the number of patients developing chronic groin pain after Lichtenstein open inguinal hernia repair at the National Hospital of Sri Lanka, Colombo. We obtained approval for the study from the ethics review committee of the Postgraduate Institute of Medicine, University of Colombo and permission from general surgeons at National Hospital Sri Lanka. One hundred patients were recruited at the time of admission to the hospital for inguinal hernia repair and consent, hernia type and contact details were collected. An information sheet was given to all participants that contained details regarding the study and a visual pain scale to help them at the 6-month follow-up. All open, routine inguinal hernia repair patients aged 18 to 70 years were recruited irrespective of their gender and mode of anaesthesia. Patients with emergency hernia repair and recurrent and bilateral hernia were excluded from the study. At 6 months following hernia repair, participants were contacted over the phone with a follow-up questionnaire.

Results

One hundred participants were recruited. However, only 75 (75%) participated in the 6-month follow-up. Of them, only 2 (2.6%) were female. (Figure 1).



In this study, 31 (41.3%) participants experienced pain at least once in the groin area at 6-month follow-up. Only 6 (8%) patients had groin pain at rest, and none reported severe pain. The incidence of mild and moderate pain at rest was 4 (5.3%) and 2 (2.7%), respectively. Twenty-four (32%) had pain during home activities and 23 (31.6%) had pain in the workplace. Only one (1.3%) had severe home and workplace pain (Table 1).

Table 1: incidence and severity of pain during activities

	At rest	During home activities	At workplace
No pain	69 (92%)	51 (68%)	52 (69.3%)
Mild	4 (5.3%)	21 (28%)	21 (28%)
Moderate	2 (2.7%)	2 (2.7%)	1 (1.3%)
severe	0	1 (1.3%)	1 (1.3%)

Almost all 74 (98.7%) patients reported no restriction of home activities due to pain, and only one patient reported occasional activity limitation. Four (5.3%) patients reported limitations in leisure/religious activities due to pain (Table 2), and five (6.6%) patients reported workplace limitations due to groin pain (Table 2).

Table 2: incidence restriction of activities due to pain

	Home activities	Leisure/religious activities	Workplace related
No restriction	74 (98.7%)	71 (94.7%)	70 (93.3%)
Seldom	1 (1.3%)	3 (4%)	4 (5.3%)
Occasionally	0	1 (1.3%)	0
Always	0	0	1 (1.3%)

Discussion

Inguinal hernia is a very common condition with a lifetime risk of 27% in men and 3% in women [1]. Inguinal hernia repair is a common procedure with over 20 million performed annually worldwide [2]. Complications following inguinal hernia repair include chronic groin pain 0-62.9% [3], recurrence 0.2% [4] and infection – 0.26% [5]. Before widespread use of the Lichtenstein tension-free hernioplasty, the recurrence rate after inguinal hernia repair was 20% [6]. But worldwide adoption of Lichtenstein repair led to a marked reduction of recurrence rate to 0.2% [4]. Thus, Lichtenstein repair is considered the gold standard in the open management of inguinal hernia [7]. Due to the marked reduction of recurrence rates, the main concern in the post-operative period shifted from recurrence to chronic groin pain after hernia repair.

Pain is defined by the International Association for Study of Pain (IASP) as an unpleasant sensory or emotional experience associated with actual or potential tissue injury or described in terms of such damage[8]. The distinction between acute and chronic groin pain is based on the time frame of the course of events. Acute pain is common to all hernial repairs. But chronic pain, according to IASP, is pain lasting more than 3 months. But after adoption of widespread use of synthetic mesh and associated inflammation,

chronic pain following inguinal hernia was defined as pain lasting more than 6 months [9]. Thus, we did our follow-up at 6 months after the hernia repair.

The reason for inguinodynia is often unclear. Most of the time it is associated with either nerve injury, nerve entrapment or associated chronic inflammation [10]. Most previous studies used visual pain scores/ numerical scores to assess pain [2,11,12]. Chronic pain scores [12] are 1-3 mild, 4-7 moderate and >7 severe pain. Chronic groin pain has a significant impact on quality of life [13]. The incidence varies among studies, ranging between 0-62.9%, with 10% of patients having moderate to severe pain. But only 2-4% were adversely affected due to chronic groin pain [3].

Available limited data from Sri Lankan studies report that around 30% of patients had chronic inguinal pain after inguinal hernia repair [14,15]. However, in our study, we found that 41.3% of patients had chronic inguinal pain at any time but only 8% had pain at rest. Only one patient (1.3%) reported severe pain and only one patient had restricted home activities with 4 (5.3%) and 5 (6.6%) limiting leisure and workplace activities, respectively. This is markedly different from previous studies done in Sri Lanka, which showed that nearly half the patients had their quality of life affected [15]. We found that only one patient sought treatment for his chronic groin pain following hernia repair. Thus, chronic groin pain following an inguinal hernia may not be a real concern in Sri Lanka or it could be that patients have poor health-seeking behaviour.

Conclusion

In summary, our study showed that the incidence of chronic groin pain is similar to Western literature but the effect on life is less, implying that chronic groin pain might not be a major issue affecting hernia patients in Sri Lanka. More in-depth evaluation to exclude poor health seeking behaviour as a cause of this discrepancy is warranted.

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