SHORT COMMUNICATION

A Questionnaire Study on the Surgeons' Preferences for Inguinal Hernia Repair After a Decade

Volkan Genc[1], Cemal Ensari[2], Hakan Kulacoglu[2], Eren Ersoy[3] and Zafer Ergul[2]

ABSTRACT

During the 20th century, hernia repair trend changed several times. A very interesting competition has been going on between the opponents of Lichtenstein and laparoscopic repairs. We recently questioned the same issue by the same method to see if laparoscopic hernia repair found more opponents and preference rate in surgeons and physicians in Ankara, Turkey. In general 88.9% of the respondents preferred open repair, while only 11.1% chose laparoscopy. The majority of the participants who preferred an open repair stated that it was a better known technique to choice. Almost half considered local anaesthesia an advantage. Laparoscopic repair was mainly preferred for its advantages of less pain and early return to work. When three consecutive surveys among the same population in Ankara in 1997, 2001 and 2007 were compared the laparoscopic repair preference rates did not show a statistical difference (9.1%, 16.1% and 11.1% respectively).

Key words: *Inguinal hernia. Survey. Questionnaire. Repair. Laparoscopic hernia repair.*

Inguinal hernia repair is probably the field where the surgeons have most variable alternatives in general surgery. During the 20th century, hernia repair trend changed several times. Shouldice technique gained popularity in the second half of the century, then mesh repair was introduced and Lichtenstein operation took the lead in many countries. Finally, laparoscopic repairs came into the scene at the end of the century.

Today, there are some strong recommendations in favour of the Lichtenstein repair. The American College of Surgeons choose this technique for "Gold standard";[1] however, laparoscopic repair techniques have evolved and many centres published very good mid-term results retrieved from prospective randomized studies.

In 1992, when laparoscopic repairs were just being introduced, Atabek *et al.* in USA conducted a survey to determine current experience and preference levels of general surgeons for laparoscopic hernia repair.[2] Only 8% of the respondents preferred laparoscopic repair for their imaginary unilateral inguinal hernia. In 1997, a similar study was carried out in Ankara, Turkey, and a 9% preference rate was found for the laparoscopic technique.[3] This rate slightly increased in a repeated study in 2001, but it was surpassed again by the preference rate for open repair.[4]

The same issue was recently questioned by the same method to see if laparoscopic hernia repair found more opponents and the preference rate of surgeons and physicians in Ankara, Turkey was sought. A single page questionnaire sheet was delivered to the surgical departments in seven teaching hospitals. The questionnaires were collected by the same persons after they had been completed. In the first part of the sheet, the surgical participants' personal laparoscopic herniorrhaphy experience was questioned. The main question in the second part was "If you had an inguinal hernia, how would you prefer to have it repaired?" Then, the respondents were required to tick their reasons on the short lists for the technique they preferred. Statistical analysis was done with SPSS for Windows 11.0. Chi-square test was used and a p-value of < 0.05 was considered significant.

In total 144 completed questionnaire forms were collected. Only 2.4% respondents performed laparoscopic repair in daily practice. The vast majority's daily routine was the Lichtenstein operation (Table I). Nearly 80% of the surgeons did not performed laparoscopic repair before. In general, 88.9% of the respondents preferred open repair, while only 11.1% chose laparoscopy. Only 4.3% had an experience of more than 15 cases. There was a very large difference between the preference rates of surgeons who had no laparoscopic repair experience and others with a rather high volume of experience (Table II). Interestingly, the respondents with less than 15 cases of experience displayed the

[1] *Department of Surgery, Ankara University Medical School, Ankara, Turkey.*

[2] *Department of Surgery, Diskapi Teaching and Research Hospital, Ankara, Turkey.*

[3] *Department of Surgery, Atatürk Teaching and Research Hospital, Ankara, Turkey.*

Correspondence: *Dr. Hakan Kulacoglu, Bahcelievler, 1.cadde, 109/5 06490, Ankara, Turkey.*
E-mail: hakankulacoglu@hotmail.com

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lowest preference rate for laparoscopic repair (open 95.2% vs. laparoscopy 4.8%). On the other hand, there was no difference between surgeons' and surgical residents' preference rates.

The institution of the surgical respondents also seemed to have an effect on their preferences for repair technique. The participants from non-university teaching and research hospitals and private hospitals displayed similarly low preference rates for laparoscopic hernia repair, while the surgeons who work in state hospitals and university hospitals revealed nearly two-fold rates.
A majority of the participants who preferred an open repair stated that it was a better known technique to choice. Almost half considered local anaesthesia an advantage. Laparoscopic repair was mainly preferred for its advantages of less pain and early return to work (Table III).

Table I: Daily practice of the surgeons for inguinal hernia repair.

Laparoscopic	2.4%
Open	97.6%
Lichtenstein	88.1%
Bassini	4.0%
Shouldice	2.4%
Others	3.2%

Table II: Laparopcopic repair experience of surgeons and their preferences.

		Open	Laparoscopic
Never performed*	79.9%	89.6%	10.4%
<15 cases	15.8%	95.2%	4.8%
≥ 15 cases	4.3%	25.0%	75.0%
		p= 0.0001	

** Almost half of them have never seen the technique.*

Table III: Reasons for choosing either technique.

Why open repair?	Percent	Why laparoscopic repair?	Percent
Better known technique	87.9	Newer technique	26.7
Local anaesthesia choice	57.8	Smaller incision	60.0
No mesh use	14.8	Less pain	93.3
		Early return to work	73.3

When three consecutive surveys in 1997, 2001 and 2007 were compared, the laparoscopic repair preference rates were not statistically different (9.1%, 16.1% and 11.1% respectively).

Not long after laparoscopic hernia repair had been first introduced in North America, Turkish surgeons started to use this new technique. However, after more than fifteen years of the introduction of laparoscopic repair, its use among Turkish surgeons is very limited. The present survey revealed only a 2.4% usage for laparoscopic technique among all inguinal hernia repairs in this country. In fact the situation is not different worldwide. The national Institute of Clinical Excellence (NICE), in 2004, stated that only 4.1% of all inguinal hernias were repaired by the laparoscopic technique in the United Kingdom.[5]

The first survey to determine the preference rate of laparoscopic hernia repair among general surgeons in the USA was carried out in 1992 and reported only a 8% preference rate for laparoscopic repair for participants' imaginary unilateral inguinal hernia.[2] This rate was 9% in Ankara, Turkey, in our first questionnaire study in 1997.[3] There was only a slight increase in the repeated study in 2001, and then a return to baseline value that recorded in 1997.

The present questionnaire study obviously tells us that laparoscopic inguinal hernia repair is not a common procedure in daily practice in Turkey and surgeons would not prefer this technique when they need it for themselves. This survey primarily searched doctors' preferences as a patient not a surgeon. Open repair was chosen mainly because it was a better known technique. This was the main reason in our two previous surveys too.[4,5] Local anaesthesia choice for open repair to avoid general anaesthesia burden was marked by only some 20% of the participants in the first survey. It reached 50% in the second survey and was still so in the last study.

Now, the question is "Why surgeons' preference rate for laparoscopic repair does not increase by time?" They might think that laparoscopic hernia repair is not as superior as laparoscopic cholecystectomy over open technique, and they might be right. However, there was a clue from the present survey that the more the surgeon had laparoscopic repair experience the more the preference rate for laparoscopy. Surgeons who had performed less than 15 laparoscopic repairs preferred this technique in questionnair with a half rate of the surgeons with no laparoscopic repair experience. The reason could be about complexity of laparoscopic approach. It could seem to be more difficult to the surgeons at the beginning and most of them might give it up without getting through it. This is the point called "learning curve".

The surgeons in many countries still do not have enough experience of laparoscopic surgery beyond laparoscopic cholecystectomy.[6] Turkey has a similar case at this field. The surgeons in Ankara know that very good results have been obtained with laparoscopic hernia repair in many centres around the world. Therefore, the share of laparoscopic hernia repair and the preference rate of this method may rise if surgeons find the facility to enhance their experience on laparoscopic surgery. Otherwise, these two figures will probably remain low in this country in the future.

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ERRATUM

A discrepancy has occurred in the sequence/order of the name of an author in the case report titled “A Case of Pseudotumorous Form of Ascaris” by Iram Bokhari, Nowaid Farooque Khan, Qurrat-ul-Ain Tahir, Nasir Ali and Asadullah Khan, published in October 2009 issue of JCPSP Vol. 19 (10): 663-664.

The name of co-author, Qurrat-ul-Ain Tahir, was mentioned as third author instead of second. Qurrat-ul-Ain is the second author of the above mentioned case report, which may be corrected and read as such.

Editor