

## Incidence of Indirect Inguinal Hernia above 50 Years Male and its Management at Avicenna Medical College and Hospital Lahore

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### ABSTRACT

**Aims:** To highlight the incidence of indirect inguinal hernia >50 years of male patients and to evaluate the results of personal experience of darning repair with prolene in primary indirect inguinal hernia in male >50 years of age.

**Material and methods:** This prospective study was carried out in surgical department of Avicenna Hospital Lahore from Jan.2010 to Dec. 2011.Total 95 patients were operated upon for primary indirect inguinal hernia ranging from 15 years to 80 years of age. But in this study only patients having primary indirect inguinal hernia were included ranging from 51 years to 80 years of age admitted throughout patients department. Direct inguinal hernias in this age group were excluded. All these patients were treated surgically by using darning repair and the results were evaluated.

**Results:** From total 95 patients with inguinal hernia treated in surgical unit only 30(31.57%) patients male >50 years of age were included. In one study published in Yemeni Journal for medical sciences in 2009 showed the incidence of indirect inguinal hernia >55 years of male was 8.3% and expected frequency of distribution of inguinal hernia according to age group is 25%. But in our study the incidence of indirect inguinal hernia >50 years of male is 31.57% which is quite high from expected frequency. Twenty eight patients (93.33%) presented with reducible hernia. Two patients (6.66%) presented with irreducible hernia in outpatient department. In twenty four (80%) patients hernia was right sided and in 6(20%) patients hernia was left sided. In post-operative complications superficial skin infection (SSI) was noted in 1(3.33%) patient. Surgery site hematoma was seen in one (3.33%) patient. One (3.33%) patient had urinary retention. No recurrence was seen up to 1year follow up.

**Conclusion:** Darning repair of inguinal hernia with prolene is a safe and cheaper method of repair. It has limited post-operative complications like recurrence, pain and wound infection.

**Key words:** Indirect inguinal hernia, prolene, darning repair

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### INTRODUCTION

Hernia is defined as the abnormal protrusion of a viscous or a part of viscous through an abnormal opening in the wall of its containing cavity. Indirect inguinal hernia occurs through the inguinal canal from deep ring to superficial inguinal ring. Inguinal hernia repair is the second most common surgical procedure after appendicectomy. Most inguinal hernias are indirect<sup>1</sup>. The choice of hernia repair method remains controversial. The high incidence of inguinal hernia makes its repair the most frequent procedure in general surgery<sup>2</sup>. In the last few decades many techniques of hernia repair have been published. Presently polypropylene and Dacron mesh are the most satisfactory since these are readily available and become well incorporated by connective tissue<sup>3</sup>. Maloney achieved recurrence rate as low as 0.8% with darning repair<sup>4</sup>. Abrahamson was the first to point out the defects that could lead to

high recurrence rates in darn repair. His series of >1000 repairs reported in 1995 recorded recurrence rates as low as 0.8%<sup>5</sup>. Recently Omer Farooq in 2005 reported 0.6% recurrence rates with darn repair<sup>6</sup>. As prolene mesh is not easily available and relatively costly, therefore increase the cost of operation. In this study we preferred darning repair because it is easily available suture material, has limited reaction and acceptable recurrence rates.

### RESULTS

Although 95 patients of indirect inguinal hernia were operated upon in south surgical unit of Avicenna Hospital Lahore from Jan. 2010 to Dec. 2011 ranging from 15 years to 80 years of age by different surgeons by various methods of personal choice. But in this study we included only selective cases of primary indirect inguinal hernia ranging from 51 years to 80 years. Thirty (31.57%) patients underwent only single procedure i.e. darning repair with prolene. Age, site of hernia, post-operative complications in the form of pain, hematoma, SSI and early recurrence

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were noted. Amongst the age incidence twenty (66.66%) patients were from 50-60 years of age. Eight (26.66%) patients were from 61-70 years of age. Two (6.66%) patients were from 71-80 years of age (Table 1). Twenty eight (93.33%) patients had reducible indirect inguinal hernia and 2(6.66%) patients had irreducible hernia (Table 2). Regarding site of inguinal hernia 24(80%) patients had right sided and 6(20%) patients had on left side (Table 3). Post-operative pain was moderate in intensity in all operated cases which was treated with analgesics (NSAIDS). No opiates were used. All patients were operated under spinal anaesthesia. One (3.33%) patient had superficial skin infection (SSI) which was treated with IV antibiotics and dressings for 3 days. Only 1(3.33%) patient developed hematoma at surgery site which was aspirated on 3<sup>rd</sup> day. The above two patients were diabetics which was controlled with s/c insulin according to physician advice. No patient developed recurrence upto 1 year of follow up. One patient had temporary urinary retention which was treated by Foley catheter (Table 4). All the patients were discharged on 3<sup>rd</sup> post-operative day except the two patients who had complications. They were discharged at the end of first week.

Table-1 Distribution of patients by age groups (n=30)

Age in years	=n	%age
51-60	20	66.66
61-70	8	26.66
71-80	2	6.66

Table 2: Mode of presentation (n=30)

Mode of presentation	=n	%age
Reducible	28	93.33
Irreducible	2	6.66

Table 3: Side of hernia

Side	=n	%age
Right	24	80
Left	6	20

Table. 4 Post- operative complications

Complication	=n	%age
Hematoma	1	33.33
Wound infection	1	3.33
Urinary retention	1	3.33
Recurrence	Nil	0

## DISCUSSION

The important factor that prevents herniation process is the anatomy of the inguinal canal. If the aponeurotic element of the post wall is absent then the transversalis fascia alone cannot withstand the repeated attacks of raised intra-abdominal pressure

for longer period. So the strong musculo-aponeurotic structure around the inguinal canal still gives protection to prevent the herniation in such individual. The aim of the surgical procedure should be to restore the strength of the posterior wall of canal by different means, although the results are expertise dependent and patient selection for different procedures.

The success of operative techniques is assessed by the rate of recurrence of hernia. If it occurs within six months it may be due to technical error or selection of procedure. Maximum recurrence occurs in first six months post operatively<sup>7</sup>.

Inguinal hernia repair is one of the most common general surgical procedure with a rate of 10 per 10,000 in the United Kingdom each year<sup>8</sup>. Inguinal hernia surgery has changed dramatically over 20 years. One of the principal aim for hernia surgery in the modern era has been to lower the recurrence rate<sup>9</sup>.

There have been many developments by surgeons such as, Halsted, McVay, Maloney and Shouldice since Bassini's pioneering work in 1887. All these surgeons had laid down the principles of repair, so that the average surgeon may attain acceptable recurrence rates. The general surgeon should choose the repair for which he/she is most comfortable to attain the results of minimum recurrence up to 1-2%.

The primary outcome parameter after inguinal repair is the risk of recurrence and re-operation<sup>10</sup>. In one paper results of 308 cases of inguinal hernia that were operated in the General Surgery Department of the Faculty Medicine Istanbul from 1989 to 1991 has been collected. Bassini repair due in 61 patients, Mcvay repair 37, Shouldice in 56, Darn repair in 132, with graft repair in 8 and high ligation in 11 patients. No recurrence has been reported among 132 hernias which were repaired by the Darn method. Post-operative hospitalization is a two days period for all of the cases except four of them. It was concluded that the prolene darn method was superior to all other techniques<sup>11</sup>.

In this study which is personal experience the results are comparable with national and international studies. However comparable outcome achieved with the darning procedure. It costs about half that of mesh repair. This cost effective aspect of the darning places it at more favourable position. Cost effective procedure has valuable place in the developing countries where the income is limited.

More work is required to attain the desirable results and judge the efficacy of darning repair technique in terms of early recurrence and cost effectiveness.

## CONCLUSION

It is concluded that though operator and expertise dependent, darn repair is still superior as a tension free modality. Darn repair has limited post-operative complications, low recurrence rate, cheap cost and early return to work.

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