# Daycare Surgery in Hernia

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**A prospective study of 80 patients who underwent elective, open day care inguinal herniorrhaphy during one year is presented. The mean age was 45 years. Eighty five percent had indirect and rest (15%) had direct inguinal hernia. The operation was successfully completed in 95% under bupicane unmonitored local anaesthesia. Darning repair was the commonest procedure performed. There was no recurrence in this series. Morbidity remained 8% and mortality was nil. The mean hospital stay remained 8 hours.**
**Key words: Hernia, day care, surgery**

The surgical treatment of hernia dates from first century B.C. with writings of Celsus who described herniorrhaphy performed by Heliodorus. Hernial repair is one of the group of operations that are basic to general surgeons. Nevertheless controversy can arise over the optimal approach and technical details of repairing almost any type of hernia.

Day care surgery was born at the beginning of 20th century[1],Farquharson in 1951 was first to say that these long waiting lists could be tackled by day care surgery. He was pioneer of day care surgery in hernia under local anaesthesia.

Day care surgery since its introduction has shared 50% work load of total operations done in a busy surgical hospital. Day care surgery is defined as planned investigations or procedure on patients who are admitted and discharged home on the same day of their surgery with some facilities for recovery. Minor procedures in the outpatient and Accident & Emergency Department are not included. However in USA, day surgery is termed as ambulatory surgery and includes patients who may spend 23 hours in hospital allowing greater range of operations to be included.

We feel day care surgery is cost effective and more acceptable to the patients.

## Patients and Methods

A total of 80 patients of inguinal hernia 12 direct, 68 indirect, were included in this study during the period of one year from January1999 to December 1999 in West Surgical Unit of Mayo Hospital, Lahore. All patients admitted through outpatient department were sent to the unit where counselling about the operation was done. Charts and required investigations were sent. These patients were advised to come in the morning 7.30am of the given list date. Operation was done under Bupivacaine local infiltration at 1.5cm medial to ant. Sup. Iliac spine and over pubic tubercle and at the site of incision which was ensured transverse skin crease incision, slightly above the standard incision. Inj. Valium or Dormicum was given to patient who complained of pain or discomfort. In two patients propofol infusion was also used. During the operation if needed local anaesthesia was repeated and given to ilioinguinal and iliohypogastric nerves. Operation was done in a standard way by dissecting the sac and ligation, with repair of deep ring and posterior wall by darning. Plicaion of fascia transversalis was also done with prolene 3/0. After meticulous haemostasis patient was sent to the unit and kept npo and pain free. If needed, Inj. Dicloran was given. Patients were examined in the evening between 6-7pm for the bowel sounds local examination for soakage of blood and haematoma. Oral sips allowed, with assistance patients allowed to sit up and then stand avoiding stress at hernial site. After the patient has passed urine and any complaint so far is noted and he is sent home in a vehicle within Lahore city radius. Patients were told about the follow up protocol in our OPD and telephone number of the unit with permission to come back in case of complication.

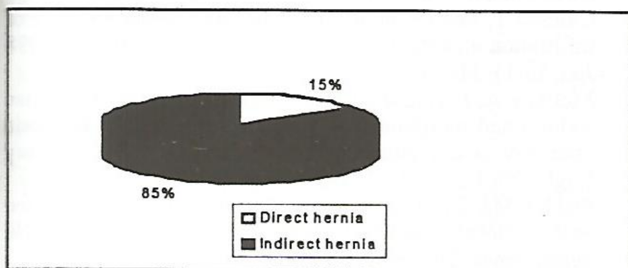
## Results

All patients in this study were male and above 12 years of age with mean age 45 years. Mode of admission was through OPD. Eighty five percent had indirect and 15% had direct inguinal hernia (Fig.1).

Out of 80 patients 4 patients local anaesthesia was ineffective because most probably due to obesity. So they were converted to G/A. rest of the patients had excellent peroperative and post operative course. As we have used Bupivcaine therefore post operative pain control was upto mark. There was no urinary retention. All the patients were given soft food and drinks in the evening and were able to walk and sit comfortably.

During the operation, maximum discomfort to the patient was experience during handling of the sac and lifting of the spermatic cord and it was the time when Inj. Valium or Darmicum. Was given specially for larger hernias. So, this step to be done as quick as possible. Two patient with pentaloon in which invagination of the sac for direct hernia and indirect hernia dealt as per routine. All patients were given preoperative antibiotics and no antibiotic was given subsequently. Only two patients had postoperative wound infection which were cured with repeated dressings. There was no recurrence over a period of one year. Follow up at seventh day and one month and then at third month was possible only in 54 patients.

Figure 1 showing the percentage of direct and indirect inguinal herniae




In the first 20 cases operating time was approximately one hour which gradually reduced 40 minutes in the last 20 cases due to the learning curve.

The mean hospital stay remained 8 hours as most of the operations were done between 12-2pm and discharged between 7-8pm. No patient came back after discharge from the unit.

**Discussion**

The outpatient and local anaesthesia approach to the repair of groin hernias has proved to be safe, effective, and less expensive, and is favored by patients. This approach reduces the surgeon's workload. In this era of increasing social pressures to reduce medical care costs seemingly regardless of the effect on quality of care – the outpatient, local anaesthesia approach should become the surgeon's preferred approach to the repair of groin hernias[2].

A recent larger review has concluded that of open techniques, Shouldice type of repair and tension free mesh repair give the most consistent good results also local anaesthesia was as safe and acceptable as general or regional anaesthesia and that for most patients day care surgery was as appropriate as planed over night stay[3].

We have not used mesh in any patient as most were young and darning with figure of eight is routine in our unit. In the past 5 years there is an impressive rise in the popularity of tension free mesh repair originally popularized by the Lichenstein and Shulman. Surgeon in training may found it easier to master than two layers or conventional four layers shouldice repair[4].

We have used propofol only in 2 patients as the patient was not absolutely comfortable with local anaesthesia. Comparing local anaesthesia with regional anaesthesia 53 patients with inguinal hernial operation with short acting regional anaesthesia and local infilteration of long acting anaesthesia were matched with long acting regional anaesthesia. Complications e.g. urinary retention was significantly greater in long acting regional anaesthesia who were hospitalized as compared to short acting group. We suggest anaesthesia for inguinal herniorrhaphy is more satisfactory provided by combination of short acting regional and long acting local one[5].

There was no recurrence in our study over a period of one year. Now comparing a study regarding recurrence of inguinal hernia under local anaesthesia which was done at Oxford Hospital in England Out of 183 patients these were 13 recurrences. The factors most strongly influencing the recurrence was the experience of surgeon with local anaesthesia technique. It was found that once 6 herniae had been repaired under local anaesthesia, the chances of recurrence fell to level of 2.5%. The recurrence of the beginner who had repaired less than 6 herniae under local anaesthesia was 9.4%[6].

Bupivacaine as local anaesthesia has produced effective relief of pain upto 6-8 hours with minimal complaints from the patient during and after the operation. Comparing a study levobupivacane with as local infilteration in inguinal herniorrhaphy results showed both of equal eficacy as local anaesthesia[7].

Cost of each hernia repair was approximately Rs.400 as compared to general anaesthesia which is Rs. 1200/- Comparing with an international study in which data of 400 consecutive cases of inguinal hernia repair under local anaesthesia with limited post operative testing was obtained by use of standardised files and questionare to assess feasibility and patient satisfaction and potential cost reductions with such a technique. One week follow up 88% were satisfied including unmonitored local anaesthesia. The cost reduction was 160 pounds per patient compared with general anaesthesia/regional anaesthesia. We conclude that elective inguinal herniorrhaphy may be performed routinely under unmonitored local anaesthesia with low postoperative morbidity. High satisfaction rate and significant cost reductions[8].

Comparing Dicloran (Diclofenac sodium) with Morphine sulphate 30mg and 10mg metochlopramide in relief of pain. Diclofenac sodium 75mg x tds to provides effective anaesthesia has more acceptable side effects profile than morphine sulphate in the treatment of ambulatory hernia surgery.

We have used Dicloran in the postop period both in the injectable as well in the oral form with effective relief of pain[9].

A portable infusion pump is also recommended in the post operative period in a randomized placebo control trial of local anaesthesia infusion in day care inguinal hernial repair[10].

**Conclusion**

The day care surgery for inguinal hernia has proved to be the safe, effective, less expensive associated with minimum complications, excellent recovery and high degree of patient's satisfaction.

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