

Original Research Article

## Uncomplicated Inguinal Hernia - A Day Care Procedure

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**Abstract:** This study is initiated to know the surgical outcome of inguinal hernia repair as a Day care surgery with respect to early post-operative pain, duration of return to normal activity, early recurrence and cost effectiveness. A total of 40 patients were studied in age group of 20-80yrs. The commonest presenting complaint was groin swelling, for duration of less than 6 months. Local anaesthesia is best suited for day care surgery of uncomplicated inguinal hernia. Most of the patients experienced mild to moderate pain post operatively. Complications of the day care surgery for uncomplicated inguinal hernia were minimal. There were no recurrences found during the study period. Longer follow up period is required to determine the exact recurrence rates. One of the problems facing hernia surgery in recent years is that of maintaining the quality of surgical care in the face of ever mounting pressure to cut costs and is increasingly active participation of the patient in decisions about surgical technique, anaesthesia and costs.

**Keywords:** Inguinal hernia, local anaesthesia, day care surgery.

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### INTRODUCTION

A protrusion of any viscus from its proper cavity is denominated as hernia. The protruded parts are generally contained in a bag by a membrane with which the cavity is naturally invested.

Inguinal hernias are operated both as an outpatient procedure and in the traditional way with the patient hospitalized. For more than a century it has been customary to admit patients for all surgeries and keep them in the hospital until they are ambulant and till the sutures are removed. This causes increasing demand for hospital beds and increased waiting list for hernia surgery, hence increases the economic burden for the hospital and to the patient.

As there is long waiting list for hernia repair surgeries, it is found from the studies that day care has reduced the burden. In 1951 Eric Farquharson, an Edinburgh surgeon, carried out day-care adult hernia repairs under local anesthesia in order to reduce long waiting lists in the newly introduced National Health Services. He introduced policies of careful assessment

and co-operation with the general practitioner to ensure care after discharge [1].

Day Care Surgery is defined as planned investigations or procedures on patients who are admitted and discharged home on the day of their surgery but who require some facilities and time for recovery.

With the introduction of Day Care Surgery for inguinal hernia repair, local anesthesia has its role. Local anesthesia can be considered for hernia repair operations, in uncomplicated cases [2].

As there is long waiting list for hernia repair surgeries, it is found from the studies that Day care surgery reduced the hospital stay and cost with fewer complications [3].

### MATERIALS AND METHODS

This was a prospective study carried out in patients for a period of November 2015 to November 2016 at Basaveshwara Teaching & General Hospital

attached to Mahadevappa Rampure Medical College, Gulbarga.

During our study, we attended to 40 cases of inguinal hernia. To keep a proper record a proforma was planned which was completed in each case.

**Inclusion criteria**

- Patients with uncomplicated inguinal hernia.
- Age 20-80 years including both the sex.
- Willing to participate in the day care surgery.

**Exclusion criteria**

- Recurrent inguinal hernia.
- Complicated inguinal hernia.
- Patients not having facilities and attendants for adequate monitoring and home care.
- Incisional hernia.

**AIMS AND OBJECTIVES OF STUDY**

- To study whether “Day care surgery” for inguinal hernia repairs suitable for the patients coming to our hospital.
- To study the feasibility of using local anaesthesia for day care surgery.
- To study the postoperative complications following day care surgery for inguinal hernia.
- To analyse the cost benefit of day case surgery in a general hospital setting.
- To study age and sex distribution, occupation, duration of symptoms, mode of presentation, location and type of inguinal hernia in adults.

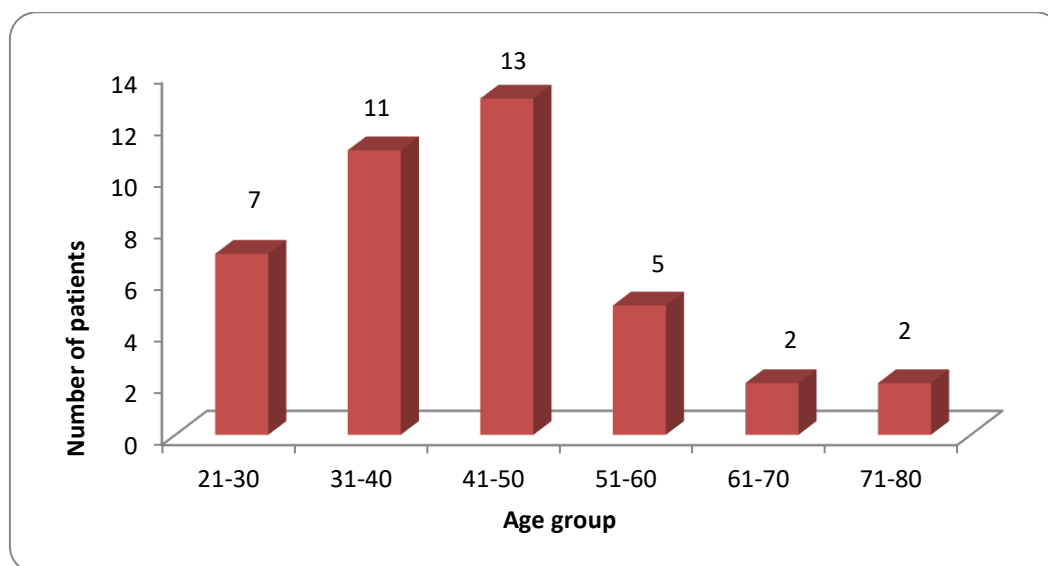
**RESULTS**

**OBSERVATIONS**

The following observations were noted in the study.

**Table-1: Age at presentation**

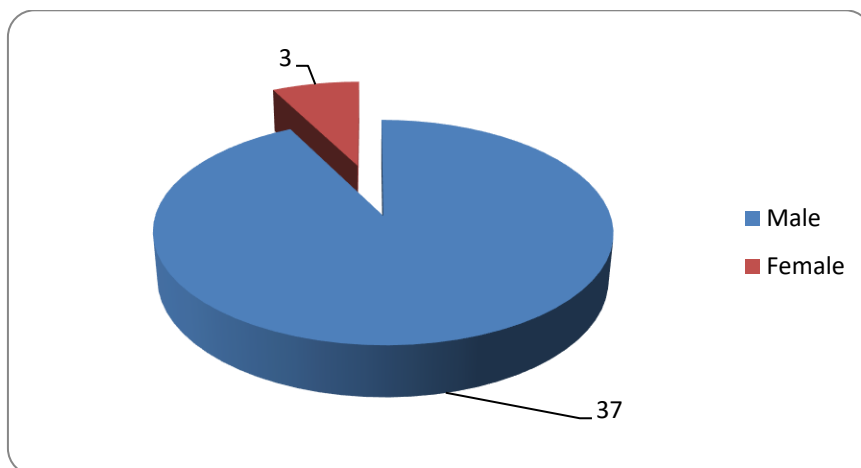
Age group	Number of patients	Percentage
21-30	7	17.5%
31-40	11	27.5%
41-50	13	32.5%
51-60	5	12.5%
61-70	2	5%
71-80	2	5%



**Fig-1: Bar graph showing age at presentation**

**Table-2: Sex distribution**

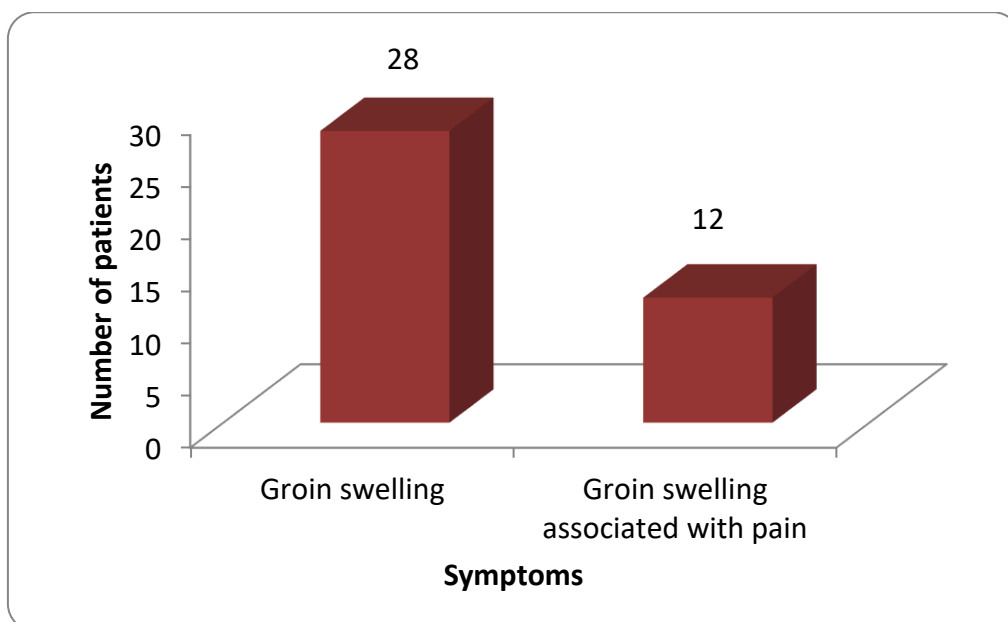
Sex	Number of patients	Percentage
Male	37	92.5%
Female	3	7.5%



**Fig-2: Pie chart showing sex distribution**

**Table-3: Mode of presentation**

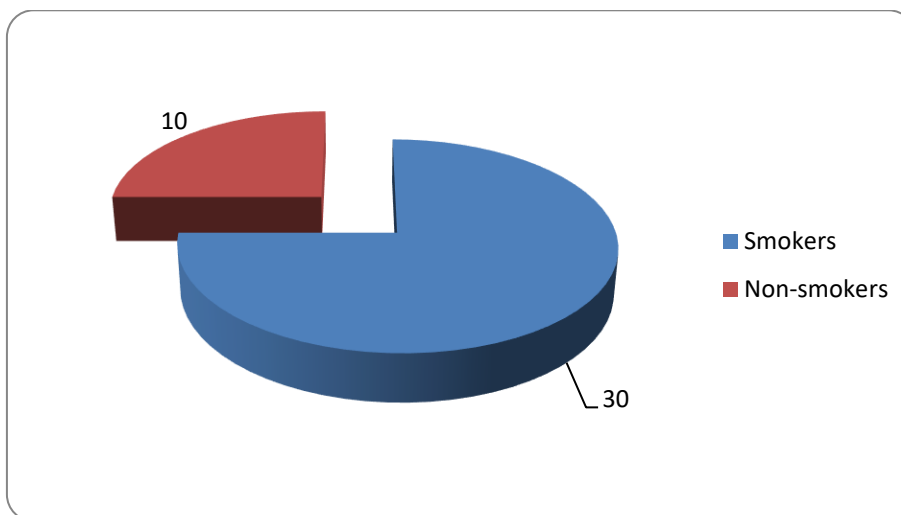
Symptoms	Number of patients	Percentage
Groin swelling	28	70%
Groin swelling associated with pain	12	30%



**Fig-3: Bar graph showing Mode of presentation**

**Table-4: Associated with smoking**

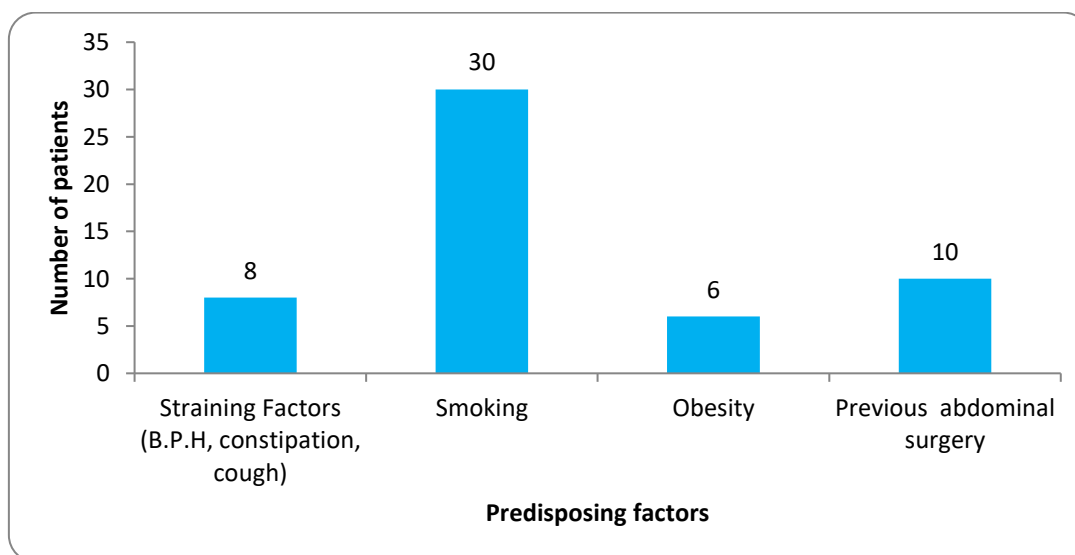
Associated with smoking	Number of patients	Percentage
Smokers	30	75%
Non-smokers	10	25%



**Fig-4: Pie chart showing associated with smoking**

**Table-5: Predisposing factors**

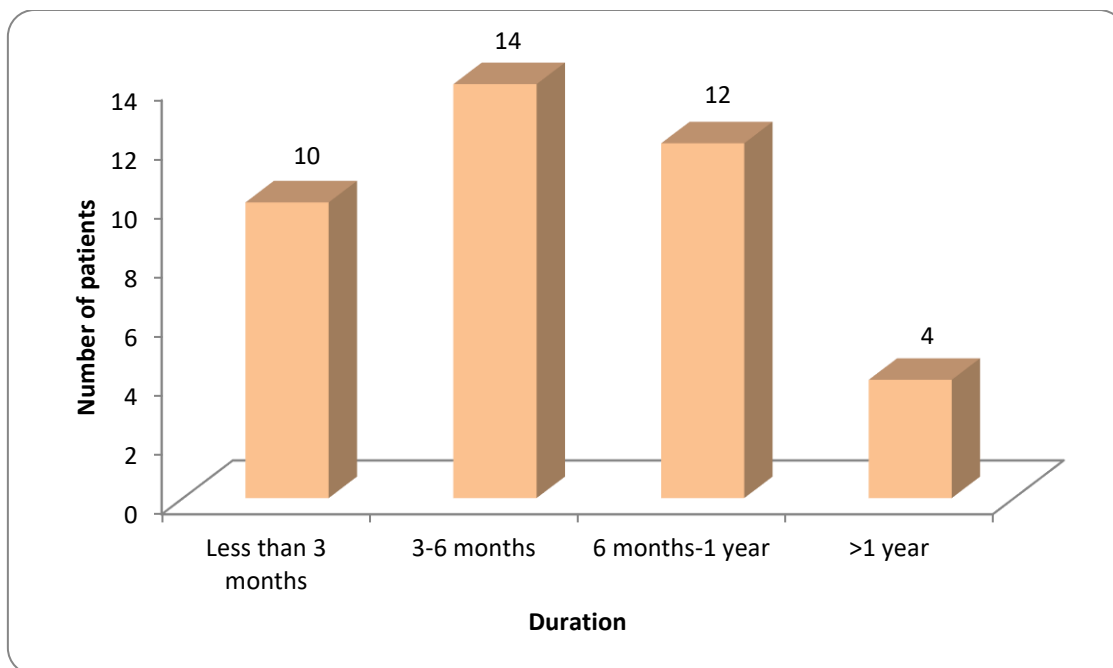
Predisposing factors	No. of patients	Percentage
Straining Factors (B.P.H, constipation, cough)	8	20%
Smoking	30	75%
Obesity	6	15%
Previous abdominal surgery	10	25%



**Fig-5: Bar graph showing Predisposing factors**

**Table-6: Duration of illness**

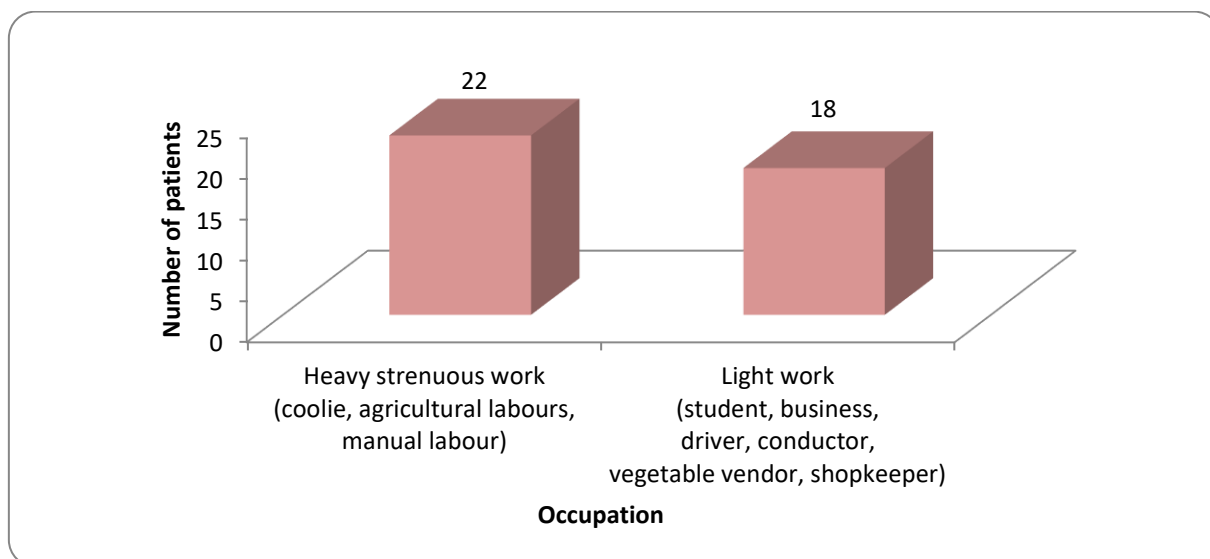
Duration	No. of patients	Percentage
Less than 3 months	10	25%
3-6 months	14	35%
6 months-1 year	12	30%
>1 year	4	10%



**Fig-6: Bar graph showing duration of illness**

**Table-7: Occupation**

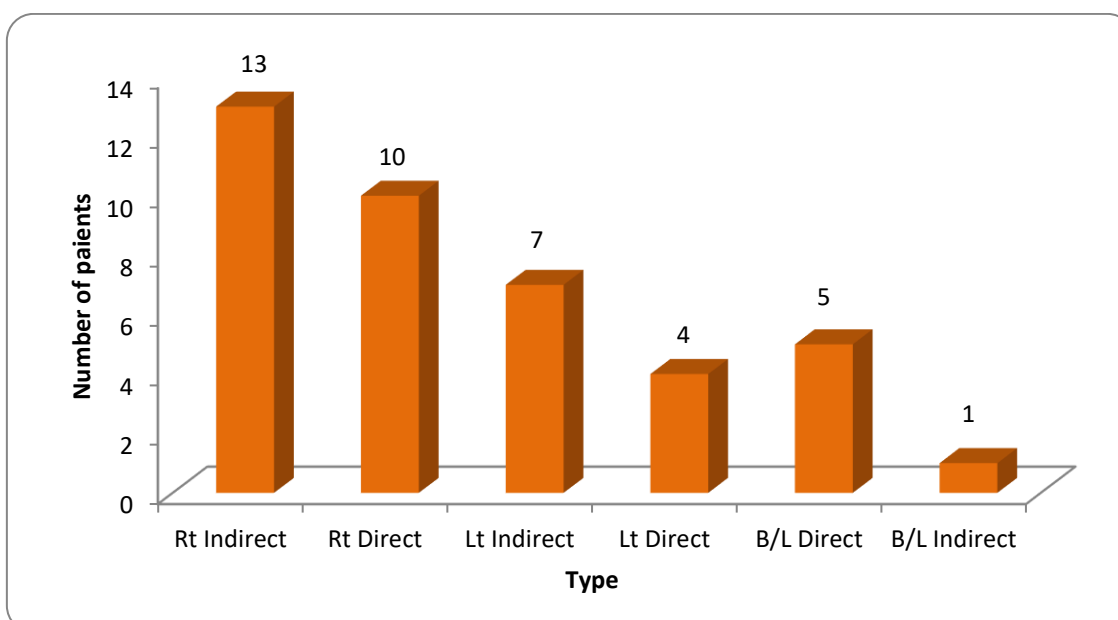
Occupation	No. Of Patients	Percentage
Heavy strenuous work(coolie, agricultural labours, manual labour)	22	55%
Light work (student, business, driver, conductor, vegetable vendor, shopkeeper)	18	45%



**Fig-7: Bar graph showing Occupation**

**Table-8: Clinical types**

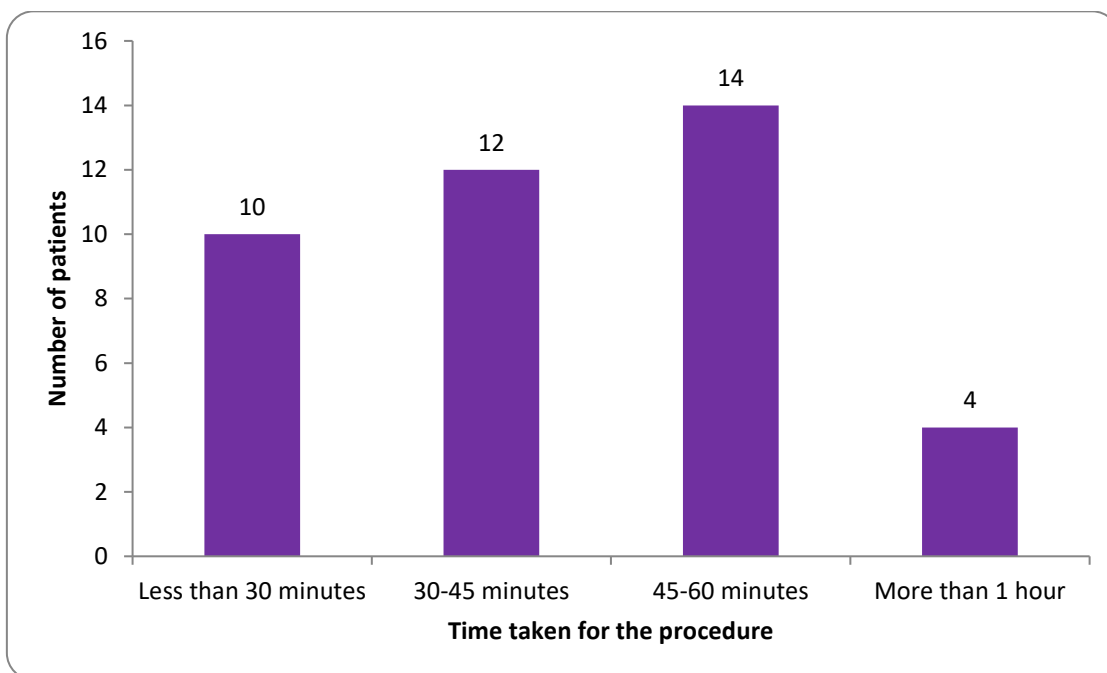
Type	Number of patients	Percentage
Right Indirect	13	32.5%
Right Direct	10	25%
Left Indirect	7	17.5%
Left Direct	4	10%
Bilateral Direct	5	12.5%
Bilateral Indirect	1	2.5%



**Fig-8: Bar graph showing clinical types**

**Table-9: Time taken for the procedure**

Time taken for the procedure	Number of patients
Less than 30 minutes	10
30-45 minutes	12
45-60 minutes	14
More than 1 hour	4



**Fig-9: Bar graph showing Time taken for the procedure**

**Table-10: Post operative pain  
(a) Pain scores at 24hrs pain grading**

Pain grading	Number of patients
No pain	0
Mild	12
Moderate	20
Severe	6
Unbearable	2

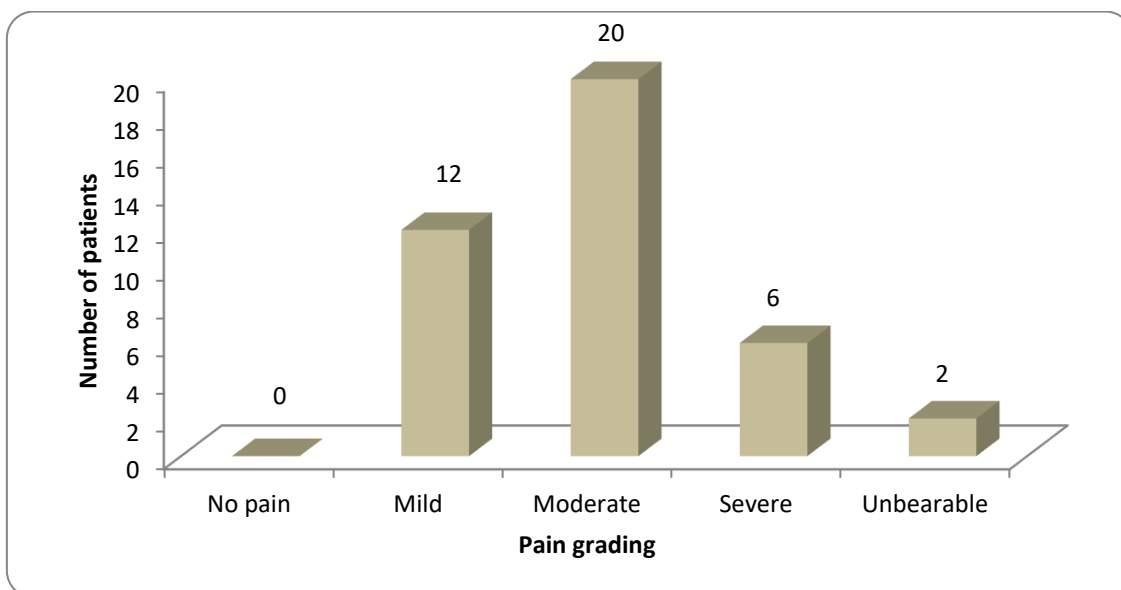


Fig-10: Bar graph showing Pain scores at 24hrs pain grading

Table-10: (b) Pain scores at 72hrs

Pain grading	Number of patients
No pain	4
Mild	28
Moderate	6
Severe	2
Unbearable	0

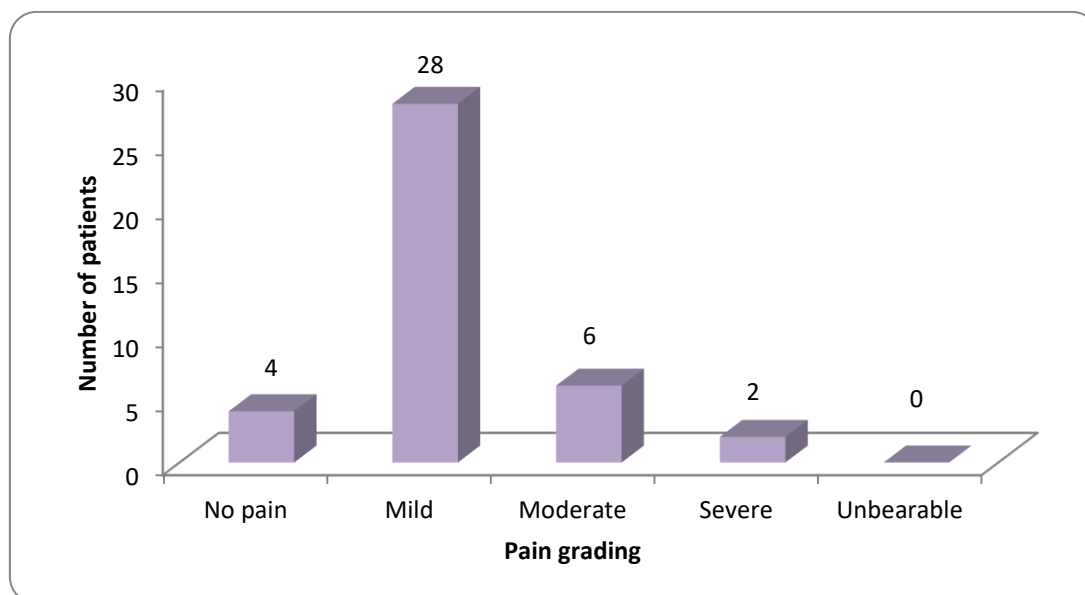
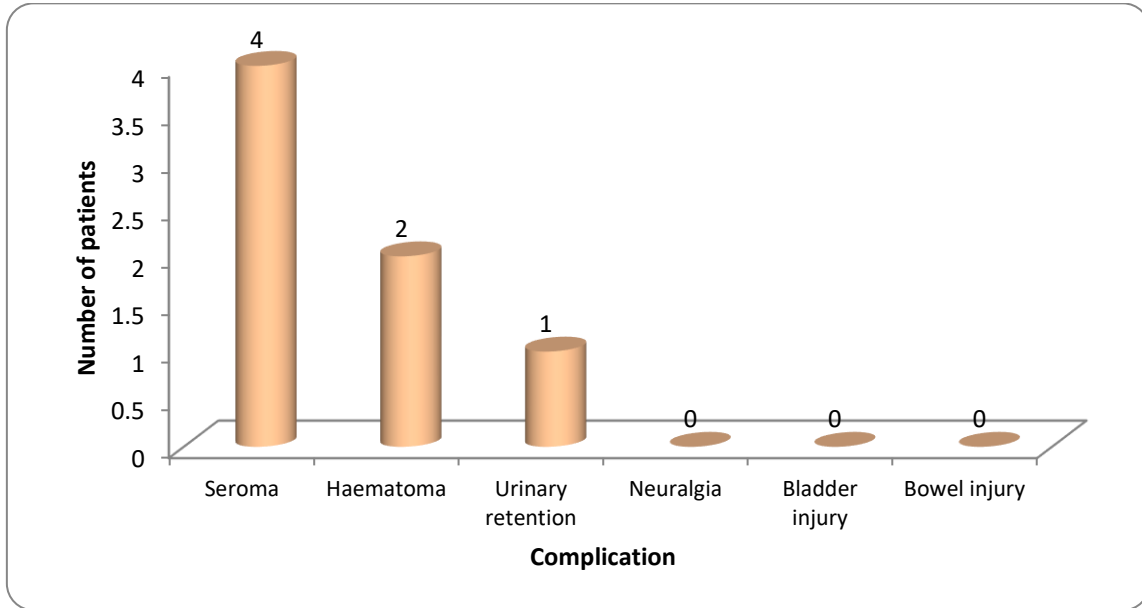


Fig-11: Bar graph showing Pain scores at 72hrs



**Table-11: Complications of Hernia Repair**

Complication	Number of patients
Seroma	4
Haematoma	2
Urinary retention	1
Neuralgia	0
Bladder injury	0
Bowel injury	0



**Fig-12: Bar graph showing complications of Hernia Repair**

**Table-12: Duration of post-operative hospital stay**

Day of discharge	Number of patients
Operated day	34
Day 1	4
Day 2	1
Day 3	1

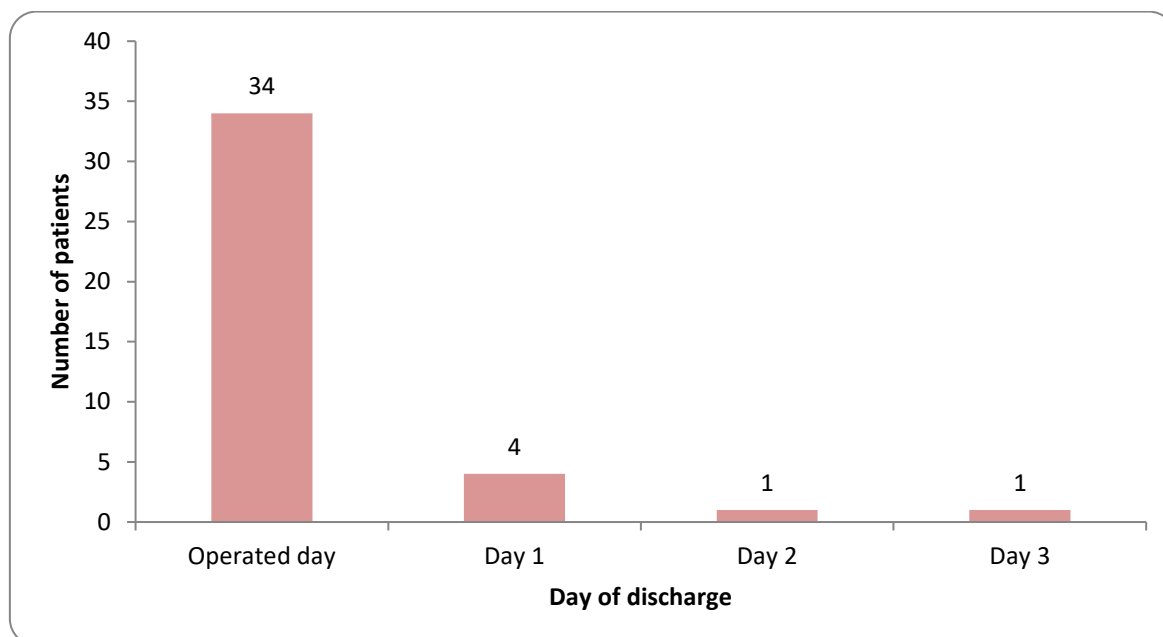


Fig-13: Bar graph showing duration of post operative hospital stay

#### Return to normal activity

The mean time taken for patients to get back to normal activity was 11-15 days.

#### Cost effectiveness

Average expenses at our centre for inguinal hernia repair as a day care surgery was Rs. 2500- 3000.

#### DAY CARE SURGERY FOR INGUINAL HERNIA [3-6]

The organization of day surgery has only really become common in place in the last 15yrs despite its advantages, which have been mooted since the early 20th century.

In 1909, James Nicoll, a Scottish surgeon, reported operating on nearly 9000 children as day cases. His motivation was to save money and use resources better. Harvey Cushing described hernia repairs under local anesthesia using Cocaine in 1900. In 1951 Eric Farquharson, an Edinburgh surgeon, carried out day-case adult hernia repairs under local anesthesia in order to reduce long waiting lists in the newly introduced National Health Services. He introduced policies of careful assessment and co-operation with the general practitioner to ensure care after discharge.

Ernest Trice in 1967 described groin hernia repair under local anesthesia with ambulation of the patient from the operating table. During the World War II with the shortage of Hospital beds, Trice sent many hernia repair patients back home on the day of surgery without any increased morbidity and mortality. Shouldice clinic performed more than 10,000 repairs under local anesthesia on day care basis with immediate ambulation.

The Royal College of Surgeons of England and Surgeons of England estimated that 50% of groin hernia surgery could be performed on day care basis by 1993. It also defined a surgical day case patient as one 'who is admitted for investigations or operation on a planned non-resident basis and who nonetheless require facilities for recovery.

Currently in USA 70% of inguinal hernioplasty is performed on day care basis and majority of patients discharged within 4hrs.

One of the problems facing hernia surgeon in recent years is that of maintaining the quality of surgical care in the face of ever mounting pressure to cut costs and is increasingly active participation of the patient in decisions about surgical technique, anaesthesia and costs. Few patients knowingly choose

to be hospitalized with ensuing expense and isolation from and family if they are offered reasonable alternatives. Faced with these problems surgeons started performing herniorrhaphies on outpatient basis as day care surgeries by discharging patients from the hospital.

Day care surgery is defined as planned investigations or procedures on patients who are admitted and discharged on the same day of their surgery but who require some facilities and time for recovery.

#### Advantages

- Reduced costs
- More efficient high-volume output of patients
- Reduced waiting lists for elective surgery
- Inpatient beds freed for major and emergency surgery
- Minimal disruption to patients life
- Early return to work and normal activities.

Day- Surgery units are the best way to achieve quality of care. It is a self- contained dedicated day surgery facility with its own reception and operating and recovery areas, designed to ensure that all the essentials for good day surgery practice are carried out.

#### Features of a Day- Surgery Unit

- Self-contained with its own reception, ward, theatre(s) and recovery area
- Well laid out with good patient inflow
- Equipped to the same high standards as in-patient ward and theatres
- Protocols for selection, analgesia and discharge criteria
- Adjacent parking
- Good-record keeping
- Consultant-led anaesthesia and surgery
- Team work between staff groups.

Selection of the patients, patient education is the important factors for the success of Day care surgery. Day care surgery is performed commonly under local anesthesia. In day care surgery patient is mobilized early and has no deleterious effect on wound healing. It reduces the incidence of complications, uplifts the patient morale and accelerates his recovery.

Early ambulation and discharge from the hospital has no influence on recurrence rate [3]. Immediate post-operative complication following repair as a day care under local anesthesia are lower for in patients or out patients under general anesthesia patient acceptability high. Early discharge from the hospital has no influence on recurrence rate [7].

The development of ambulatory hernia surgery is a great step forward. If done correctly and carefully, patients will be grateful and appreciative and society will benefit by freeing up limited hospital resources for critically ill.

## DISCUSSION

### CLINICAL FEATURES OF INGUINAL HERNIA [8]

#### History

##### Age

Inguinal hernias occur at all ages. They may be present at birth or appear suddenly in an 80 year old. Peak times of presentation are in the first few months of life, in the late teens and early 20's and between 10 and 60 years. Indirect hernias are seen in young individuals whereas direct are seen in older subjects.

##### Sex

Males are 20 times more commonly affected than females.

##### Occupation

Heavy work, especially lifting puts a great strain on the abdominal muscles. If there is an underlying weakness, the appearance of a hernia may coincide with strenuous physical effort. Hard labour workers, sportsmen and weight lifters are more prone.

##### Associated diseases

Many a times, hernia is due to diseases causing weakness of anterior abdominal wall like obesity, previous lower abdominal operations, ascites and Malgaigne's bulges. Certain diseases lead to increase in abdominal pressure such as prostatic enlargement, stricture urethra, chronic cough and respiratory disorders and chronic smoking.

Local symptoms:

##### Pain

The commonest symptoms are discomfort, heaviness and pain in the initial stages. The patient

complains of a dragging, aching sensation in the groin, which gets worse as the day passes.

### Lump

A lump in the groin is the second most common complaint. This may be a small lump of 2-3 cms or a huge lump going down to the knee level. Patient feels that it gets smaller when he lies down and bigger when he strains or stands.

### Systemic symptoms

If the hernia is obstructing the lumen of a loop of bowel, the patient may complain of one or more of the four cardinal symptoms of intestinal obstruction — colicky abdominal pain, vomiting, abdominal distension and absolute constipation. In late cases of strangulation where gangrene has set in, patient can present with features of peritonitis, more so if perforation of bowel has occurred.

### Signs

#### Inspection

In standing position, a bulge or swelling will be seen in groin. This might disappear on lying down, if the hernia is reducible spontaneously in direct hernia. Impulse on coughing is present in reducible hernia. Loss of rugosities of scrotal skin in large inguino-scrotal hernias is seen. Visible peristalsis is seen in enterocele. Malgaigne bulges are seen in patients with lax abdominal wall. An indirect hernia is sausage or pear shaped and lies parallel to the inguinal ligament. After reduction it reappears more laterally and runs down above the inguinal ligament towards the scrotum. A direct hernia is more rounded, more medial, bulges forward and tends not to go down to scrotum. After reduction it reappears in a forward direction.

#### Palpation

Reducing the hernia by manipulation is called taxis and it is performed in lying down position of the patient. As the hernia is reduced following features are noted:

- Gurgling sound is felt in enterocele.
- In enterocele first part takes longer to reduce and in omentocele later part.
- Impulse on coughing is felt.

#### Internal Ring Occlusion Test

Internal ring is occluded and patient is asked to cough. If a bulge is seen medial to the occluding finger, then it is a direct hernia, if not an indirect hernia.

#### External Ring Occlusion Test

After complete reduction, the external ring is occluded with a finger and patient is asked to stand up gently. The reducible inguinoscrotal swelling will not come down as its descent is prevented by occluding finger, where as swelling fills gradually from below in case of varicocele and lymphvarix.

#### Finger Invagination Test

After reduction of the hernia, this test may be performed to palpate the hernial orifice. The skin is invaginated from the bottom of the scrotum by little finger, which is pushed up to palpate the pubic tubercle. The finger is then rotated and pushed further up into the superficial inguinal ring.

Normal ring is a triangular slit which admits only the tip of a finger. When the finger enters the ring, it goes directly backwards in direct hernia and it goes upwards, backwards and outwards in indirect hernia. The finger is again rotated so that the pulp of the finger faces backwards. The patient is again asked to cough. If the impulse is felt on the pulp of the finger, the hernia is a direct one, if it is felt on the tip, then it is an indirect hernia. “Sharma’s ring”, may be felt in the sac during finger invagination test.

#### Percussion

Over the swelling, tympanic, if it is an enterocele and impaired or dull in case of omentocele.

#### Auscultation

- Bowel sounds will be heard in enterocele.
- Differential Diagnosis of Inguinal Hernia

When the swelling is incomplete i.e. an inguinal or a groin swelling:

- Femoral hernia.
- Enlarged Inguinal Lymph Nodes.
- Saphena Varix
- Femoral Aneurysm.
- Encysted Hydrocele of the Cord.
- Lipoma of the Cord.
- Undescended or Ectopic Testis.
- Psoas Abscess.
- Malgaigne Bulges.
- Spermatocele.
- Lymph Varix.

When the swelling is complete i.e., inguinoscrotal swelling.

- Infantile Hydrocele.
- Congenital Hydrocele.
- Encysted Hydrocele of the Cord: Already discussed.
- Varicocele.

#### COMPLICATIONS OF GROIN HERNIA

- Irreducibility of the contents
- Intestinal obstruction
- Incarceration of the content
- Strangulation of the content
- Rupture of hernia (spontaneous or traumatic)
- Urinary tract complications
- Testicular strangulation in infants
- Involvement of hernia in disease process
- Reduction en masse.

#### ANAESTHESIA FOR HERNIOPLASTY [9,10]

Initially, field block was the means of achieving of local anesthesia. During the last 5yrs, a simple infiltration technique has been used because the field block was more time consuming and required larger volume of local anesthesia. The choice and delivery of a safe effective anesthesia for inguinal hernioplasty is based on the type and extent of surgical procedure, concomitant diseases and side effects of anesthetic agents and organ function. Increased attention has been paid to the provision of stress free anesthesia and surgery in order to reduce postoperative pain and morbidity. Finally these considerations must be balanced with the direct cost of medical procedures including anesthetic service and preoperative examination.

#### Local anesthesia

The perfect choice of anesthesia for all reducible adult inguinal hernia is Local. It is safe, simple, effective and economical without post anesthetic side effects. Success requires proper technique of administration and gentle manipulation of anaesthetized tissues.

Lignocaine is the anesthetic agent of choice. A concentration of 0.5% provides adequate sensory block, as much as 120ml of 0.5% lignocaine (600mg) can be used over 2hrs for repair of difficult inguinal hernias. Without untoward effect lignocaine gives anesthesia for approximately for 1½hrs.

Mixture of lignocaine 1% or 0.5% and bupivacaine 0.5%, 50:50% being used. The therapeutic maximum dose of lidocaine 1% is 300mg, in plain form and 500mg with adrenaline and bupivacaine 0.5% dose 175mg plain and 225mg with adrenaline. Lidocaine provides rapid onset and bupivacaine results in longer duration of local anesthesia. Reduction in burning pain due to local anesthesia and reduction in onset time has been reported with addition of sodium bicarbonate 8.5% by adding 1ml of HCO<sub>3</sub> solution per 9ml of lidocaine. It brings pH to comfortable from 6.0 to 7.5.

Use of two different anesthetic agents decreases the likelihood of exceeding the maximum therapeutic dose of each individual agent an average 45ml of this mixture usually sufficient for a unilateral hernia.

#### Technique

A regional/field block supplemented by infiltration produces total anaesthesia in the operative area. A dosage of 30-35 ml ordinarily suffices for the entire procedure and its administration adds no more than 2 minutes to the total operating time.

**Step 1:** A skin wheal is raised 2cm medial to the anterior superior iliac spine of the ilium. Before the needle is extracted approx 10ml of solution is injected the needle traverses the parietal muscles, first in direction of the iliac spine to block the iliohypogastric and ilioinguinal nerves and then toward the umbilicus to block the last two intercostals nerves.

**Step2:** Approx 5ml of solution is used to infiltrate the epidermis at the site of incision.

**Step 3:** An additional 5 ml of solution is utilized to inject the subcutaneous tissues beneath the incision before the surgery is begun. This serves to block the overlapping branches of the external femoral cutaneous and the femoral branch of genitofemoral nerves. This step is essential or the patient will feel discomfort as the superficial vessels and nerves are divided.

**Step4:** Dissection is carried out down through scarpa's fascia. A small window is dissected in the lateral aspect of the incision, through the deep subcutaneous fat, until the classic transverse fibers of the external oblique aponeurosis are visualized. 5ml of solution is deposited in this subaponeurotic space prior to clearing this layer.

This is a key step if pain is to be avoided, since the aponeurosis is sensitive on its external surface. When the external oblique is incised down to include external ring the entire level and its sensory nerves will be surrounded by the anesthetic solution.

**Step 5:** Several millimeters of solution is deposited beneath the transversalis fascia near the pubic tubercle and the internal abdominal ring. This blocks the sympathetic fibers in the cord and the genital branch of genitofemoral nerve.

This step is essential if a deep ache is to be avoided when traction is applied to the cord.

**Step 6:** If hernia is indirect, 1-2 ml Of solution is injected about the neck of sac before it is opened. If the hernia is direct 1-2ml of solution is placed in the rectus fascia at the site of relaxing incision since this is invariably supplied by a sensory nerve twig.

#### Advantages

- The field and regional block that is needed for hernia repair is well within the capability of the surgeon to administer and so the operation does not require an anesthetist.
- Patients operated under local anaesthesia were able to walk, eat and pass urine earlier than those having GA who experience more nausea, vomiting, sore throat, headache, so local anaesthesia is safe acceptable and alternative to GA.
- Local anesthesia involves requires less disturbance of cardio respiratory function so less intensive postoperative care.
- It imports a gentle technique upon surgeon because the patient is only interested in painless operation at this stage. The surgeon is less likely to use tension with repair. This decreases the amount of swelling and pain and facilitates early ambulation. Local anaesthesia is the perfect choice for day care surgery and short stay surgery as patient can walk away

without complications and postoperative monitoring.

- The patient walks out of the operation theater which boosts his morale postoperatively and has greater impact on his short hospital stay and less complication rates.
- The ability to do an intra-operative stress test with an awake, co-operative patient helps in identification of strength of posterior wall to identify any evasive hernia and to test the suture line and the anatomic relationships.
- Decreases the duration of hospital stay and decreased need for post-operative analgesia and post-operative complications are minimized.
- It eliminates the adverse effects and complications of general anaesthesia and short anaesthesia and minimizes the cost of surgery with no increase in recurrence rate.

#### Disadvantages

- Can't be used in patients who are sensitive to local anesthetic drugs, obese and markedly over weight (BMI >26.2).
- It can't be employed in children and patients with anxiety.
- In recurrent hernia repair however satisfactory analgesia is not always obtained because of poor diffusion of solution through scar tissue.

#### Treatment of Inguinal Hernias [11, 12]

Aim of treatment of inguinal hernia comprises of exposing the site of defect, correcting the anatomical defect, strengthening or reinforcing the deficiency in the posterior wall of the inguinal canal. Treatment of inguinal hernias is essentially surgical, exceptionally temporarily conservative, when efforts are made to keep the hernia in reduced state by clinical maneuvering, till the time the patient becomes fit for surgery.

The results of the present study were compared with those of the previous studies as follows:

**Age at presentation**

Age group(yrs)	Delvin [5]	Bhola singh Sidhu [13]	Louies & Wendell [14]	Present study
<20	-	-	0.3%	-
21-30	10.1%	12%	12.1%	17.5%
31-40	11.6%	28%	16.2%	27.5%
41-50	17.3%	20%	17.3%	32.5%
51-60	28.6%	8%	27.4%	12.5%
61-70	-	24%	23.3%	5%
71-80	-	-	-	5%

The incidence of age at presentation of inguinal hernia was maximum between 30-60yrs of life in a study by Louies and Wendell, Delvin and Bhola singh. In the above studies the maximum incidence of age between 3rd and 6<sup>th</sup> decades of life, the results are comparable with present study.

**Sex Distribution**

In study by Ira, 90% inguinal hernia cases were males and 10% females. Studies by Lichtenstein 94% were male patients and 6% female patients occurring at any age, males were more commonly affected than females. In this study 92.5% were males and 7.5% were females. The results of the present study are comparable with that of the previous studies.

**Occupation**

In our study most of patient occupation (55%) involves strenuous work. In Bhola Singh Sidhu, 44% hernia patients were doing jobs, which involve strenuous work. In present study, occupation involving strenuous work (55%) of the study population could be the precipitating factor by increasing the intra-abdominal pressure.

**Mode of Presentation**

Most common presentation of hernia is swelling. In present study of 40 patients 70% of patients presented with swelling in groin and 30% of patients presented with dragging type of pain along with the swelling in groin.

**Location and Type of Hernia**

Type	Louies & Wendell [14]	C Palanivelu [15]	Present study
Indirect	65%	76%	52.5%
Direct	20%	24%	47.5%

In our study indirect hernias occurred more frequently (52.5%) than direct inguinal hernias(47.5%)

which is comparable with other studies by Louies & C Palanivelu.

Location	Louies & Wendell	Bhola Singh study	Present study
Rt	49%	60%	<b>57.5%</b>
Lt	38%	36%	<b>27.5%</b>
B/L	13%	4%	<b>15%</b>

In our study 57.5% are on the right side followed by 27.5% on left side. Both direct and indirect inguinal hernias were common in the right side. In our study 15% were bilateral. The higher incidence of

hernia on the right side might be due to later descent of right testis and higher incidence of failure of closure of processus vaginalis.

**Duration of illness**

Duration	Bhola Singh & Sidhu [13]	Present study
<6 months	56%	60%
6- 1 yr	12%	30%
>1yr	32%	10%

Majority of patients in our study presented within 6 months of duration of symptoms and operated. It is comparable to previous studies.

**Duration of Hospital stay**

The duration of postoperative stay has been falling in recent years after the introduction of day care surgery. It not only relieves hospital waiting lists but also represents an economic advantage and has certain social benefits for the patients.

In our study 85% of the patients were discharged on the same day. 10% of the patients were discharged on the 1st post-operative day. 2.5% were discharged on 2<sup>nd</sup> post-operative day. 2.5% were discharged on 3<sup>rd</sup> post-operative day.

Previous studies show that post-operative stay for short stay surgery was 2.2 day [3] 3.8 days [4]. The results of the present study are comparable with the previous study which shows that day care surgery can very well be practiced in our set up.

**Complications of Hernia**

Local complications like seroma were present in 10% of patients & haematoma in 5% of patients. All the complications were treated conservatively. In previous studies haematoma noted in 3.8% of cases [4], 4% of cases [13]. The results of the present study are comparable with that of the previous studies.

**Return to normal activity**

The mean time to return to normal activity in the present study was 11-15 days.

**Cost-factor**

Inguinal hernia repair as a day care surgery was very cost effective. Average expenses at our centre were Rs. 2500-3000.

**Recurrence**

A weakness in the operation area necessitating further operation (Marsden 1958) or the presence of expansile cough impulse [5].

The overall recurrence rate reported is 10% for primary and 25% for recurrent inguinal hernia. In present study the recurrence rate is 0.

**CONCLUSIONS**

Inguinal hernia most commonly affects the age group of 3<sup>rd</sup> -6<sup>th</sup> decade with more predilections towards male sex & it involves most commonly on the right side.

With improved quality of surgical care, day care surgery can be providing to selected group of uncomplicated inguinal hernia patients under local anaesthesia.

It is safe, efficient & cost effective as it significantly decreases the duration of hospital stay with the majority of patients getting discharged on the same day followed by early return to normal activity.

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