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"CASE SERIES ON UNCOMPLICATED INGUINAL HERNIA REPAIR AS A DAY CARE SURGERY"

General Surgery

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ABSTRACT

Day care surgery provides a high quality, patient-centered treatment that is safe, efficient and effective and is accompanied by a lower incidence of hospital acquired infection and early return to normal activity compared with in-patient treatment. day-care surgery for uncomplicated unilateral and bilateral inguinal hernia repair in patients can be managed without significant complications as compared to routine-care surgery.

MATERIALS AND METHODS A prospective study of 50 patients conducted in Department of General Surgery, ASRAM Medical College, ELURU, over 2 years, from October 2016 to September 2018. Patients with uncomplicated inguinal hernia who are willing for day care surgery are involved in this group. Complicated and recurrent inguinal hernias are excluded.

RESULTS Duration of hospital stay, rate of complications are reduced in day care surgery for inguinal hernia. The cost effectiveness and return to daily activities was also better in case of day care surgery for uncomplicated inguinal hernia.

KEYWORDS

Day care surgery, unilateral or bilateral uncomplicated inguinal hernia.

INTRODUCTION

DAY CARE SURGERY FOR INGUINAL HERNIA

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.

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 throughput of patients
- Reduced waiting lists for elective surgery
- In-patient beds freed for major and emergency surgery
- Minimal disruption to patient's life
- Early return to work and normal activities

FEATURES OF A DAY- SURGERY UNIT

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

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**.**

PATIENTS AND METHODS

This is a prospective study of 50 patients conducted in Department of General Surgery, ASRAM Medical College, ELURU, over 2 years, from October 2016 to September 2018.

Inclusion Criteria

- Patients with uncomplicated inguinal hernia.
- Age 20-60yrs including both the sex.
- Willing to participate in the day care surgery.

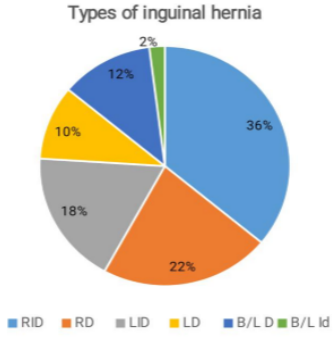
Exclusion Criteria

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

OBSERVATION AND RESULTS

The following observations were noted in the study

Among 50 cases of inguinal hernia 36% of cases are right indirect inguinal hernia, 11% were right direct inguinal hernia, 18% of were left indirect inguinal hernia, 10% were left direct inguinal hernia, 12% were B/L direct inguinal hernia. The above study shows that 54% were indirect, 32% were direct of which 58% right , 28% left sided & 14% were bilateral. Among these cases right sided hernia is more common compared to left sided hernia, and indirect hernia is more common compared to direct hernia.



Among 50 patients 68% of people present with complaint of groin swelling, 32% of people present with swelling and pain.

The above study shows that most commonly affected age group being 41-50 Years. Among 50 cases 20% of people are of 21-30 years, 30% of people are of 31-40 years, 36% of people are of 41-50 years, 14% of people are in age group of 51-60 years.

Pain is graded according to Mc gill pain questionnaire.3 patients complain of unbearable pain after 24 hours of surgery, 11 patients

complain of severe pain after 24 hours of surgery, 24 patients complain of moderate pain after 24 hours of surgery, 12 patients complain of mild pain after 24 hours of surgery.

1 patient complain of unbearable pain after 72 hours of surgery, 4 patients complain of severe pain after 72 hours of surgery, 6 patients complain of moderate pain after 72 hours of surgery, 33 patients complain of mild pain after 72 hours of surgery, 6 patients complain of no pain after 72 hours of surgery.

Males had higher incidence (98%) of inguinal hernia when compared to female.

Among 50 patients 84% of patients have history of smoking, 16% of patients are non-smokers.

Among 50 patients in our study 54 % of the patients were associated with predisposing factors and smoking was associated with 84% of the patients Straining factors like chronic cough, BPH play an important role in predisposition to hernia.

Majority of patients presented and operated were within 1 year of onset of disease. In this among 50 people about 60% within 6 months of onset of disease, 26% with in 6months to 1 year of onset of disease, 14% after 1 year of onset of disease.

Among 50 patients studied 46% of patients are involved in heavy strenuous work, 22% of people are involved in light work, 32% of people are from retired and unemployed group.

Among 50 patients time taken for the procedure was calculated, for 32 patients time taken for operation was about 30 minutes to 45 minutes, for 16 patients it was about 45minutes to 1 hour, for 2 patients time taken for surgery was more than 1 hour.

Among 50 patients of uncomplicated inguinal hernia post-operative complications have been studied, 4 patients have developed seroma over suture site, 3 patients developed seroma with scrotal oedema, 5 patients developed urinary retention, 1 patient developed superficial wound infection. No patients developed hematoma and neuralgia.

In this study among 50 patients most of them (38 patients) are discharged on the day of surgery, 6 patients were discharged on post-operative day 1, 4 patients are discharged on post-operative day 2, 2 patients are discharged on post-operative day 3.

In this study patients who underwent hernioplasty under local anaesthesia had less post operative stay at hospital.

The mean time taken for patients to get back to normal activity was 12-14days.

Average expenses at our centre for inguinal hernia repair as a day care surgery was Rs .2000-3000.

DISCUSSION

1. AGE AT PRESENTATION

The incidence of inguinal hernia or age at presentation of inguinal hernia was maximum between 30-60yrs of life in a study by Louies and Wendell with incidence of 60.9%, Delvin with incidence of 57.5%, and Bhola singh with incidence of 56%. In the above studies the maximum incidence of inguinal hernia between 3rd and 6th decades of life and our study with distribution of 80% among 30-60years of age which is significant and comparable with other studies. In present study in age group of 21-30years there were 20% of total cases, 31-40years is 30% of total cases, 41-50years there is 36% of total cases, 51-60years is 14% of total cases.

2. 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. In this study 98% were males and 2% was females

3 OCCUPATION

In present study most of patient occupation (46%) involves strenuous work followed by light and indeterminate work (22%). Rest of the patients were (32%) unemployed and sedentary. In Bhola Singh Sidhu, 44% hernia patients were doing jobs, which involve strenuous work.

4. MODE OF PRESENTATION

In present study of 50 patients 68% of patients presented with swelling in groin and 32% of patients presented with dragging type of pain along with the swelling in groin. This shows that 32% of population neglected hernia till they developed pain.

5. LOCATION AND TYPE OF HERNIA

In present study 58% of total hernias are on the right side followed by 28% of total hernias on left side on comparing to a study done by Louies and Wendell, Bhola singh and sidhu and Delvin .In present study 14% of total cases were bilateral . In present study 56% of total cases were indirect hernias which is comparable to other studies. Both direct and indirect inguinal hernias were common in the right side. This is due to later descent of right testis and higher incidence of failure of closure of processus vaginalis.

6. RISK FACTOR

In present study 58% were smokers and 12% were obese (whose BMI>26.5), 16% were with factors contributing to raised intra abdominal pressure and 1.5% were previously operated for appendectomy on the same side of anterior abdominal wall. These factors were contributing for formation of hernia and have influence on present study population. This study shows that most common predisposing factor for inguinal hernia was smoking which is about 50%.

7. DURATION OF ILLNESS

Majority of patients in our study presented within 6 months of duration of symptoms and operated which is comparable to previous studies. There were few patients (14%) presenting one year after onset of hernia as it is not associated with pain and lack of awareness and complications associated with it. In present study 60% of the total patients presented early to hospital within 6 months of duration of symptoms onset. In a study conducted bhola singh & sidhu 56% of patients presented with in 6months of onset of symptoms. The result of patients presenting within 6 months of onset of disease is comparable to other studies. In present study 26% of people presented to hospital within 6month to 1year of onset.

8. DURATION OF HOSPITAL STAY

In present study 76% of patients were discharged on the same day. 12% of total cases were discharged on 1st postoperative day.8% were discharged on 2nd postoperative day and 4% of patients were discharged on 3rd postoperative day due to inadequate home care facilities. Patients who are well informed about the course of disease and postoperative care are well motivated for early discharge, and good postoperative care. Pain is a key parameter directly related with rate of recovery following surgery . In this study patients in the local anaesthetic group reported significantly lower levels of early post-operative pain. Anaesthetic drug doses, post-operative levels of analgesic, sedative and anxiolytic prescription protocols. Anwer et al. found that the patients undergoing the open surgical repair under local anaesthesia experienced less discomfort intra-operatively when the local anaesthetic was a pre-warmed, buffered solution, administered as a slow infiltration, which aided in lower rates if local anaesthetic failure.Furthermore, other possible influences such as history of chronic pain, previous hernia surgery, type of mesh used and psychosocial factors such aspatient expectations, prepared-ness, employment status and insurance standing were not studied in detail .

9. COMPLICATIONS OF HERNIA

Local complications like seroma, seroma with scrotal edema, superficial wound infection were noted. In present study 14% had seroma. All the complications were treated conservatively with scrotal support and analgesics. Experienced surgeons can perform surgery with minimal trauma, thus avoiding the onset of post-operative complications, such as chronic neuralgia54. Other complication like urinary retention noted in the present study which was about 10% of total cases.

10. RETURN TO NORMAL ACTIVITY

In present study patients who were obese and those who do heavy and strenuous work took more time when compared to patients who do light work. The mean time to return to normal activity was 12-14 days

11. COST EFFECTIVENESS

Inguinal hernia repair as a day care surgery was very cost effective. Average expenses at our centre was Rs. 2000 – 3000/-.

Inguinal hernia surgery forms a substantial proportion of the general surgical workload. Inguinal hernia repair is ideally suited to day surgery and increasing numbers of procedures are being performed in this setting.

This reduces the inconvenience and risk to the patient associated with in-patient (routine-care) hospital stay and also substantially reduces the cost associated with the surgery.

12. RECURRENCE

In the present study the recurrence rate is 0%, it cannot be compared because the study group is small & not all patients turned up for regular follow up and follow up period was less. It is very difficult to project accurate incidence of recurrence as it will depend on the length of follow up.

CONCLUSIONS

Day care surgery provides a high quality, patient-centered treatment that is safe, efficient and effective and is accompanied by a lower incidence of hospital acquired infection and early return to normal activity compared with in-patient treatment. Day-care surgery for unilateral hernia repair in patients can be managed without significant complications as compared to routine-care surgery. Results are comparable to standardized day-care units also. Looking at the advantages of reduction of hospital stay and greater satisfaction, day-care hernia should be promoted. Day-care surgery could be expanded in government setups for inguinal hernia and many other surgeries. High quality day surgery is dependent on careful patient information, case selection, skilled surgery and anaesthesia, adequate postoperative analgesia, rapid communication and continued audit. Commonest age group affected was 4 and 5th decade. Most of them were males with right sided inguinal hernia. Most common type hernia noted in the study was right sided indirect hernia Straining which causes raised intra abdominal pressure, smoking, obesity, occupation, previous surgeries contribute to formation of hernia. Local anaesthesia is with less immediate postoperative complications, best suitable for day care surgery. Most of our patients (76%) were discharged on the same day. Day care surgery was very cost effective and patients were satisfied with the procedure executed. Long term follow up is required for full determination of recurrence rates.

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