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An analytical study of acute surgical emergencies in groin hernia

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Abstract
Aim and Objectives: This is a analytical study about various presentations, etiopathogenesis, complications and management in acute surgical emergencies in groin hernia presented in Trichy SRM medical college Hospital from May 2019 to October 2021.
Observation and Conclusions: Incidence of highest in age group of 60yrs to 70yrs and Complication of inguinal hernia was more common in males than females and it was observed hernia is commoner on the right side than on the left side. The most common symptom was groin swelling with pain followed by vomiting and most common content found in the sac was small bowel followed by omentum with the most common site of obstruction. The most common procedure followed in my study was only herniorraphy. It was followed by omentectomy.

Keywords: groin hernia, emergency hernia, complications of hernia

Introduction

Aims of study

1. To study about various presentations, etiopathogenesis, complications and management in acute surgical emergencies in groin hernia.
2. To study types of hernia that present as acute emergency

Materials and Methods

This study analytical study done in Trichy SRM medical college Hospital from May 2019 to October 2021. The study group was managed only by department of surgery. Patients are of age group of 20-88 yrs. Duration ranges from 2 hrs to 10 days, 87 cases were studied. These cases were studied from time of admission till discharge and followed up in outpatient department. A detailed history was elicited and clinical examination was done. All patients were given pre-operative antibiotics and the same was continued for 4 day post operatively.
Patients in our study include those with good health to those with associated medical disorders. The results of study were later analyzed and have been presented in this study.

Observation and Analysis

Eighty seven patients were studied. Mean age of the patients was 53.25 years

Table 1: Age group

Age group	Frequency	Percentage
11 - 20	3	3.4
21 - 30	6	6.9
31 - 40	11	12.6
41 - 50	15	17.2
51 - 60	18	20.7
61 - 70	25	28.7
71 and above	9	10.3
Total	87	100.0

In various studies done the mean age group involved in complicated groin hernia is 60 - 70 years. In my study complicated hernia is widely distributed in age groups from 30- 70 years with maximum incidence in age group of 60 – 70 years.

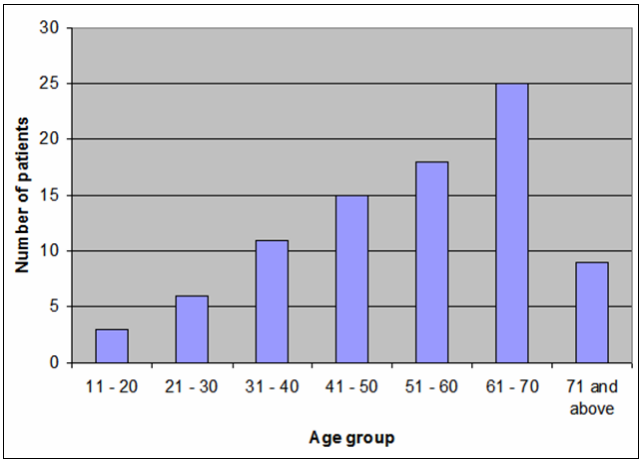

Fig 1: Age distribution

Table 2: Sex Distribution

	Frequency	Percentage
Female	3	3.4
Male	84	96.6
Total	87	100.0

In our study majority of the cases were males, with male to female ratio of 28:1. This shows increased incidence of complicated hernia among men.

Table 3: Types of hernia with sex

	Inguinal	Femoral
Female	1	2
Male	84	0
Total	85	2

In my study complicated femoral hernia was found to be more common among women, and complicated inguinal hernia was more common in men.

Table 4: Duration of hernia before acute episode

	Frequency	Percent
1st year	57	65.5
2nd year	16	18.4
3rd year	5	5.7
4th year	2	2.3
5 and above years	7	8.0
Total	87	100.0

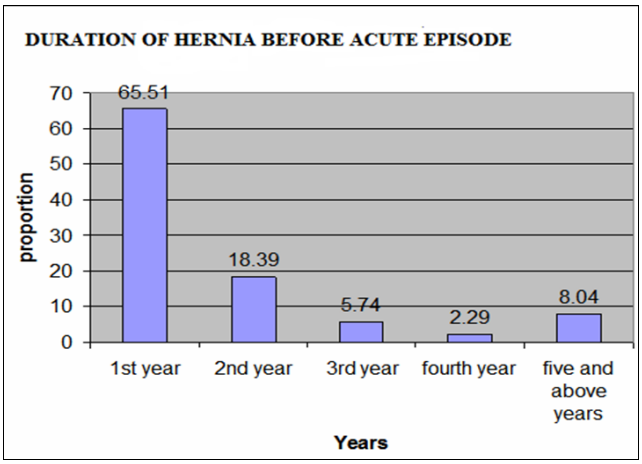

Fig 2: Duration of hernia before acute episode

Table 5: Side of hernia most commonly complicated

	Frequency	Percentage
Right side	67	77.01
Left side	20	22.99
Total	87	100

In my study right sided hernia was found to be more common than left sided hernia with rt: lt ratio of 3.35: 1

Table 6: Symptoms

	Frequency	Percentage
Pain with groin swelling	86	98.9
Vomiting	50	57.5
Irreducibility	21	24.1
Abdominal distension	16	18.4
Obstipation	11	12.6
Nausea	5	5.7
Fever	2	2.3
Feculent vomiting	1	1.1

In my study the most common symptom was groin swelling with pain followed by vomiting.

Table 7: Contents of the hernial sac

	Frequency	Percentage
Small bowel	62	71.3
Omentum	32	36.8
Caecum	10	12.5
Appendix	5	5.7
Sigmoid	4	4.6
Testis	4	4.6
Ascending colon	1	1.1
Transverse colon	1	1.1

According to Andrew *et al*. the most common content in the hernial sac was small intestine. In my study also the small intestine was the commonest content followed by omentum.

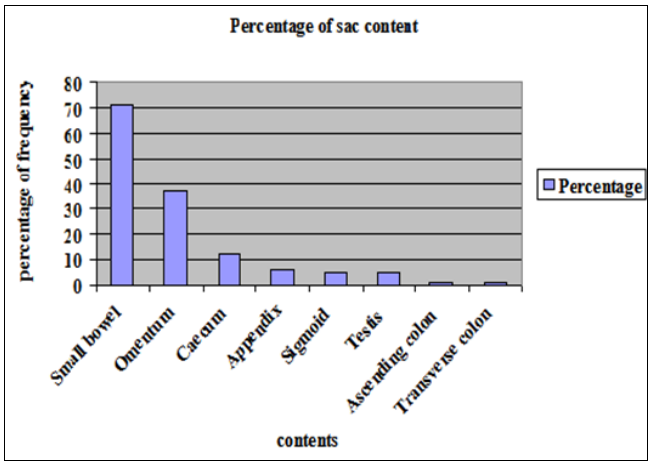

Fig 3: Percentage of sac content

Table 8: Site of obstruction

	Frequency	Percentage
Deep ring	48	55.2
Superficial ring	37	42.5
Femoral ring	2	2.3

In standard studies most common site of obstruction is the deep ring. In our study also the most common site of obstruction was the deep ring.

Table 9: Optimum procedure done

	Frequency	Percentage
Herniorrhaphy only	46	52.8
Omentectomy	18	20.7
Orchidectomy	12	13.8
Resection anastomosis	9	10.3
Kuntz	6	6.9
Eversion of sac	2	2.3
Appendicectomy	1	1.1
Ileostomy	1	1.1

In my study all patients underwent Moloney's darn repair. Darn repair was done with 1- Prolene with three layers darn. The most common procedure done was Herniorrhaphy alone among 52.8% of the patients, followed by omentectomy in 20.7% of the patients. Resection anastomosis was done in 10.3% of the patients. Kuntz repair was done for aged and recurrent hernia patients.

Table 10: Post operative complication

	Frequency	Percentage
No complication	53	60.9
Seroma	22	25.3
Wound gaping	7	8
Haematoma	3	3.4
Enterocutaneous fistula	2	2.3

All the patients were given preoperative antibiotic, ceftriaxone 1.5gm IV at the beginning of the procedure and continued for four days post operatively. Most of the patients recovered without any complication (60.9%). Most common complication was found to be seroma (25.3%) which was managed conservatively. There were three cases of hematoma of which two needed evacuation on the third post operative day. There were seven cases of wound gaping, for which culture and sensitivity was done and appropriate antibiotics were given. All underwent secondary suturing after the infection was controlled. Two cases had enterocutaneous fistula, of which one patient died post operatively on fourth day due to systemic inflammatory response syndrome (SIRS), and the other patients were managed conservatively with spontaneous closure of the fistula.

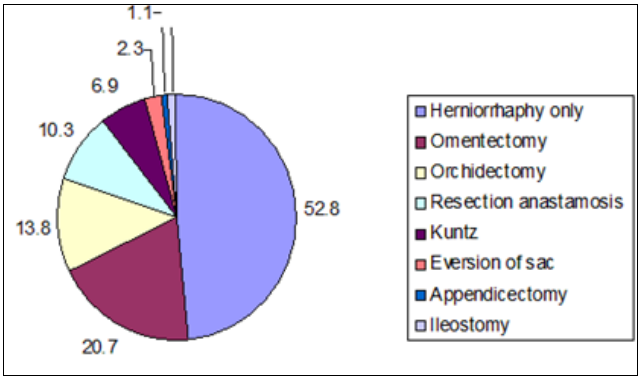

Fig 4: Percentage of different procedures done

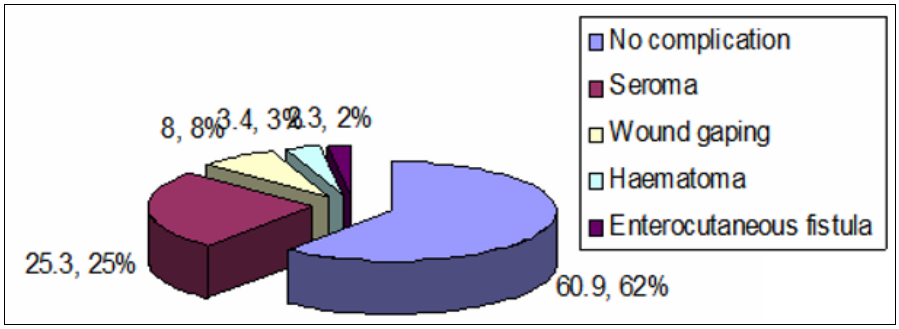

Fig 5: Proportion of post operative complication

The risk of strangulation in different age group
Series 1: Proportion of patients in that age group
Series 2: Proportion of patients with severe complications

The patients in the age group above 50 yrs were found to have strangulation. The highest numbers were seen between the age group of 61 to 70 yrs. The incidence of strangulation increased as the age increased. The percentage of patients in older age group were found to have higher incidence of strangulation with highest being in 71 yrs and above.

Conclusion

The following observation was made in this study

1. Incidence of acute complication of groin hernia was found to be highest in age group of 60yrs to 70yrs**.**
2. Complication of inguinal hernia was more common in males than females and complication of femoral hernia was more common in females than males
3. The incidence of acute complication of groin hernia is three times commoner on the right side than on the left side.
4. The average duration of hernia before acute episode was 19,45 months. Majority of acute presentation was within first year of developing hernia and more than 80% of them presented within first two years.
5. The most common symptom was groin swelling with pain followed by vomiting
6. The most common content found in the sac was small bowel followed by omentum
7. The deep ring was found to be the most common site of obstruction
8. The most common procedure followed in my study was only herniorraphy. It was followed by omentectomy.
9. Majority of the patients post operative period was uneventful. The most common complication encountered was seroma.
10. The patients with older age group were found to have strangulation more commonly than younger age group. The percentage of strangulation progressively increased from 50 years and above.

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