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ORIGINAL ARTICLE

Evaluation of cases of Morgagni's hernias in study patients

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***ABSTRACT*:**
Background: A Morgagni's hernia is a congenital defect found in the anterior aspect of the diaphragm between the costal and the sterna portions of this muscle. The present study was conducted to analyze cases of Morgagni's hernias in study patients. **Materials & Methods:** The present study was conducted on 68 patients of Morgagni's hernia of both genders. Location of the hernia sac and its contents, postoperative complications, and duration of hospital stay were evaluated. **Results:** Out of 68 patients, males were 38 and females were 30. We found that left side hernia was in 24 males and 22 females, right side in 14 males and 8 females. Elective operation was done in 20 males and 14 females, syndrome operation was done in 18 males and 16 females. Mesh was used in 23 males and 18 females, suture in 10 males and 6 females, both suture and mesh in 5 males and 6 females. Hernia was removed in 30 males and 25 females, hernia was remained in 8 males and 5 females. There were 4 complications in males and 2 in females. **Conclusion:** Authors found that maximum cases were of left side and elective operation was done in maximum cases.
Key words: Morgagni's hernia, Elective operation, Sac.

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INTRODUCTION

A Morgagni's hernia is a congenital defect found in the anterior aspect of the diaphragm between the costal and the sterna portions of this muscle. In 1796, Giovanni Batista Morgagni first described the substernal herniation of abdominal organs into the thoracic cavity, based on his observation at the postmortem examination of a patient who died of head injury.[1]

Hernia of Morgagni is the rarest of the four types of congenital diaphragmatic hernia (2%–3% of all cases). In adults, it commonly presents with non-specific symptoms—for example, excess flatulence and indigestion. In severe cases, it might present with symptoms of bowel obstruction or strangulation. In children, the majority present with repeated chest infection; rarely it might present in the neonatal period as acute respiratory distress syndrome. More than half are detected when patients are being investigated for unrelated problems. Morgagni, Larrey, Morgagni-Larrey, Retrocosto-xiphoid, diaphragmatic dome, posterolateral level, parasternal, retrochondrosternal, retrosternal, subcostal, substernal, and subcostosternal hernias are among names used in the literature. There is also confusion about the sides of Morgagni's and Larrey's description.[2]

Some authors accept both right and left sides for Morgagni's or Larrey's hernias. A diaphragmatic hernia may be located at the esophageal hiatus (sliding and paraesophageal hiatal hernias) or at posterolateral location on the diaphragm (Bochdalek's hernia) or at the parasternal region (Morgagni-Larrey). There are also traumatic hernias of the diaphragm which occurs after closed thoracoabdominal trauma or stab wounds of the thoracoabdominal region.[3] The present study was conducted to analyze cases of Morgagni's hernias in study patients.

MATERIALS & METHODS

The present study was conducted in the department of general surgery. It comprised of 68 patients of Morgagni's hernia of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institute ethical committee.

General information such as name, age, gender etc. was recorded. In all, symptoms of presentation, physical examination findings, preoperative imaging studies and diagnosis, and surgical procedures were recorded. Location of the hernia sac and its contents, postoperative complications, and duration of hospital stay were evaluated. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Graph I Distribution of patients

Total- 68		
Gender	**Male**	**Female**
Number	38	30

Table I, graph I shows that out of 68 patients, males were 38 and females were 30.

Graph I Distribution of patients

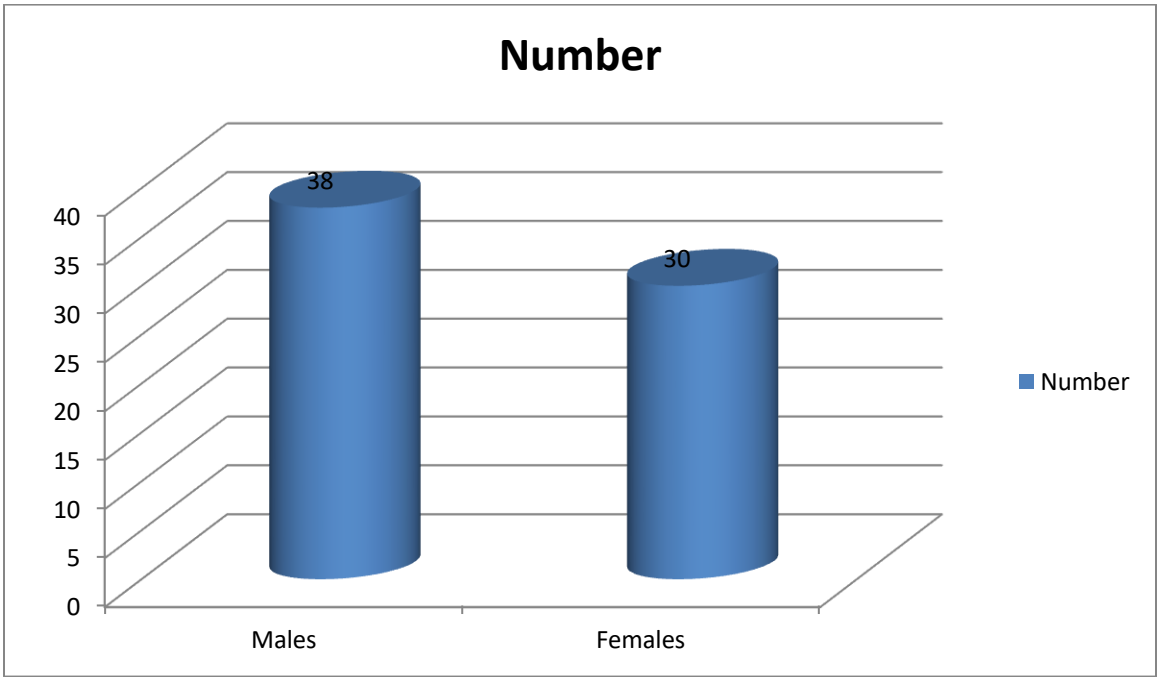
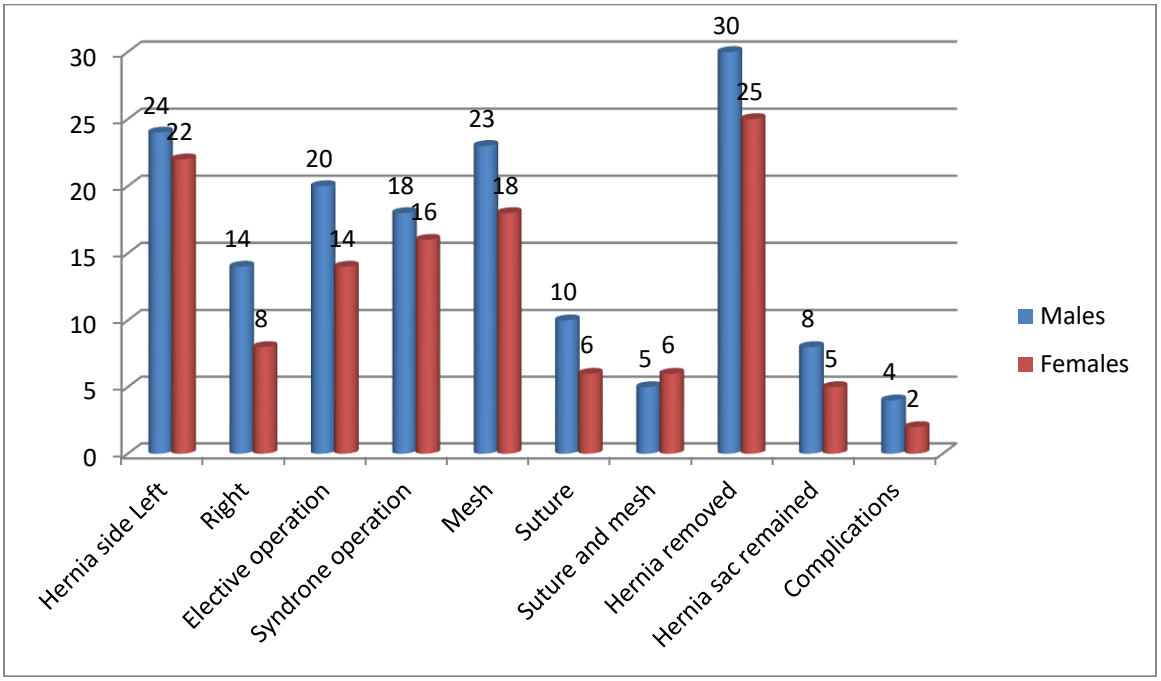


Table II Assessment of parameters

Parameters	Males	Females	P value
Hernia side Left	24	22	0.9
Right	14	8	0.7
Elective operation	20	14	0.01
Syndrone operation	18	16	0.05
Mesh	23	18	0.04
Suture	10	6	0.03
Suture and mesh	5	6	0.9
Hernia removed	30	25	0.71
Hernia sac remained	8	5	0.05
Complications	4	2	0.01

Table II, graph II shows that left side hernia was in 24 males and 22 females, right side in 14 males and 8 females. Elective operation was done in 20 males and 14 females, syndrome operation was done in 18 males and 16 females. Mesh was used in 23 males and 18 females, suture in 10 males and 6 females, both suture and mesh in 5 males and 6 females. Hernia was removed in 30 males and 25 females, hernia was remained in 8 males and 5 females. There were 4 complications in males and 2 in females. The difference was significant ($P< 0.05$).

Graph II Assessment of parameters



DISCUSSION

Diagnosis can be difficult and a missed diagnosis can lead to life threatening complications such as obstruction or strangulation. A et al found that hernia of Morgagni presents itself more acutely (seven cases, 14%) and subacutely in children (19 cases, 40%). In recent years there has been a rise in the number of cases reported, with an approximate total of 200 cases in the last 10 years. This may be due to greater awareness of its diagnosis and because of early treatment to prevent any complications. However, hernia of Morgagni may be more frequent than the literature suggests since most cases are asymptomatic.[4]

Diagnosis is confirmed by plain chest radiographs and contrast films. Hernia of Morgagni usually presents with recurrent chest infections in children (55%) and lateral chest radiographs are usually always conclusive. Screening may apply to children with increased risk associated anomalies and familial forms of congenital diagphragmatic hernias (from 34% to 50%). Patients with Down's syndrome (five cases) have increased risk of hernia of Morgagni. Obese patients may develop it later in life and sometimes it may follow trauma.[5] The present study was conducted to analyze cases of Morgagni's hernias in study patients.

In present study, out of 68 patients, males were 38 and females were 30. We found that left side hernia was in 24 males and 22 females, right side in 14 males and 8 females. Elective operation was done in 20 males and 14 females, syndrome operation was done in 18 males and 16 females. Mesh was used in 23 males and 18 females, suture in 10 males and 6 females, both suture and mesh in 5 males and 6 females. Hernia was removed in 30 males and 25 females, hernia was remained in 8 males and 5 females. There were 4 complications in males and 2 in females.

Fagelman et al[6] reported that 70% of patients with Morgagni's hernia are female, 90% of the hernias are right-sided, and 92% of the hernias have hernia sacs. This type of hernia is a rare clinical entity and accounts for 3% of all surgically treated diaphragmatic hernias. There are no large retrospective or prospective studies on this topic. This type of hernia is a rare type among adults without a well described prevalence and without well-established definitive management strategies.

Collie et al[7] advise a transthoracic approach as it provides a wide exposure and easy repair of the hernia sac. This is also advocated by Kilic et al[8] who performed thorocotomies on 16 patients, all with uneventful recoveries and no recurrence of symptoms. However, Bentley and Lister describe a patient who had to undergo a second operation for intestinal obstruction after the initial thoracic procedure failed to diagnose bilateral hernia of Morgagni. Thorocotomy was indicated when the diagnosis was uncertain. The first laparoscopic repair was reported by Commer et al.[9]

The transabdominal approach was favoured when the diagnosis was certain as it allows easier reduction of the hernia, especially for bilateral hernias. Furthermore, abdominal viscera within the hernia can be easily pulled down to their normal location in the abdomen. The sac can then be withdrawn and resected along the margins

of the defect if need be. In our patient, we left the sac and part of the omentum in situ, closed the defect with interrupted, nylon sutures and reinforced it with a polypropylene mesh.[10]

CONCLUSION

Authors found that maximum cases were of left side and elective operation was done in maximum cases.

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