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## Original Article

### Assessment of Cases of Splenectomy- A Clinical Study

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#### ABSTRACT:

**Background:** Splenectomy is usually performed for patients with severe splenic trauma, portal hypertension etc. **Materials & Methods:** The present study was conducted in the Department of General Surgery. It comprised of 102 patients of both genders. In all cases laparoscopic splenectomy was performed as per standardized operating procedure. Post operative complications if any were also recorded. **Results:** Out of 102 patients, males were 57 and females were 45. Hereditary spherocytosis was seen in 45 patients, hypersplenism in 15, multiple splenic cysts in 18, splenic tuberculosis in 10 and splenic hemangioma in 14 patients. The difference was significant ( $P < 0.05$ ). Complications were seen in 10 patients. Hemoperitoneum in 1, pneumonia in 1, wound sepsis in 6 and urinary infection in 2. **Conclusion:** Authors found hereditary spherocytosis, hypersplenism, multiple splenic cysts, splenic tuberculosis and splenic hemangioma main reasons in which laproscopic splenectomy is performed.

**Key words:** Hypersplenism, laproscopic splenectomy, splenic tuberculosis.

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#### INTRODUCTION

The “gold-standard” definition of splenomegaly is splenic weight: the normal adult spleen weighs about 50–250 g, and this decreases with age. This can clearly only be established at splenectomy or post mortem examination, and it is surprisingly difficult to establish a practical clinical definition of splenomegaly.<sup>1</sup>

The clinical finding of a palpable spleen was previously considered to be evidence of splenic enlargement, but up to 16% of palpable spleens have been found to be of normal size on radiological assessment.<sup>2</sup> While clinical examination can be convincing in massive splenic enlargement, radiology is often needed to confirm the diagnosis. A single radiological definition of normal splenic size has not been adopted, and the assessment is often partly subjective.<sup>3</sup>

Splenectomy is usually performed for patients with severe splenic trauma, portal hypertension, splenomegaly due to

hematologic diseases, or splenic tumors. Intraperitoneal hemorrhage is a fatal complication following splenectomy.

It is associated with surgical manipulation and hematologic coagulation. For prompt management of bleeding, it is important to make the diagnosis promptly by carefully observing the clinical manifestation, monitoring the blood hemoglobin level, and imaging with ultrasonography.<sup>4</sup> Laparoscopic splenectomy can be safely performed and have gained wide clinical practice today. It leads to decrease in complication related to trauma, access to magnified view of the opposite side and avoidance of manipulation of left side of diaphragm.<sup>5</sup>

The present study aimed to assess the cases of splenectomy.

#### MATERIALS & METHODS

The present study was conducted in the Department of General Surgery. It comprised of 102 patients of both

genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study. General information such as name, age, gender etc. was recorded. In all cases laparoscopic splenectomy was

performed as per standardized operating procedure. Post operative complications if any were also recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

**RESULTS**

**Table I: Gender wise distribution of patients**

Total- 102		
Gender	Males	Females
Number	57	45

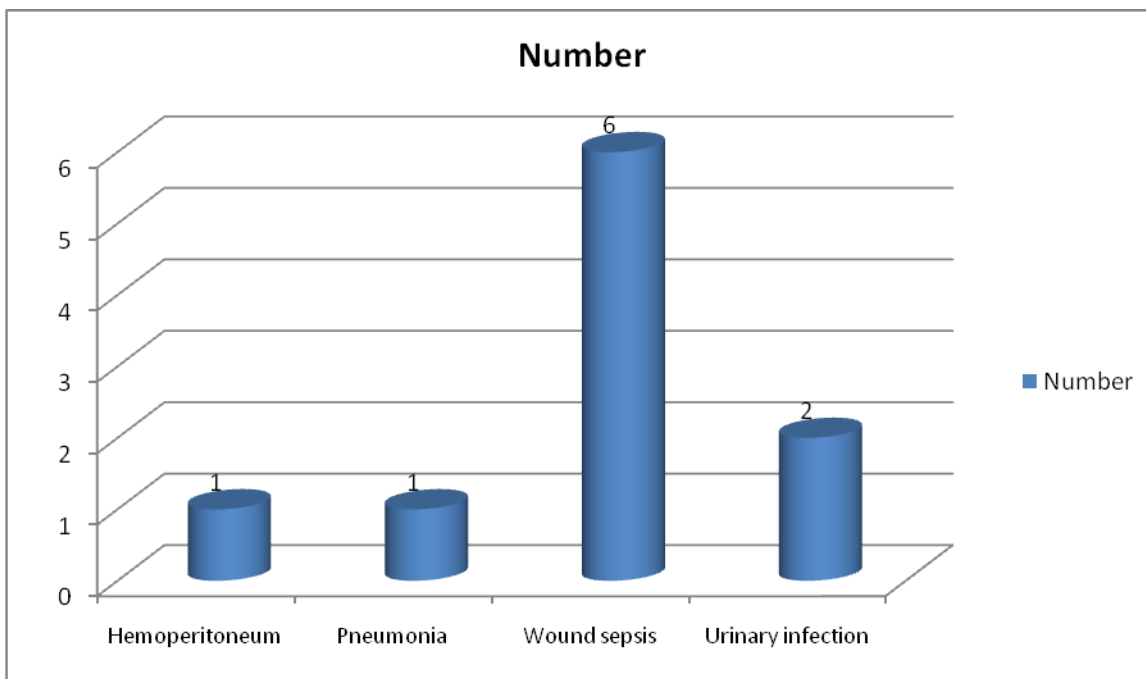
Table I shows that out of 102 patients, males were 57 and females were 45.

**Table II: Diagnosis of patients**

Diagnosis	Number	P value
Hereditary spherocytosis	45	0.01
Hypersplenism	15	
Multiple splenic cysts	18	
Splenic tuberculosis	10	
Splenic hemangioma	14	

Table II shows that hereditary spherocytosis was seen in 45 patients, hypersplenism in 15, multiple splenic cysts in 18, splenic tuberculosis in 10 and splenic hemangioma in 14 patients. The difference was significant (P< 0.05).

**Graph I: Complications of procedure**



Graph I shows that complications were seen in 10 patients. Hemoperitoneum in 1, pneumonia in 1, wound sepsis in 6 and urinary infection in 2.

## DISCUSSION

With advancement of laparoscopy and technology laparoscopic approach is routinely considered for patients requiring elective splenectomy regardless of spleen size. Laparoscopic approach to diseases related to solid organ such as spleen and liver has lagged behind operations on hollow viscous because of problems related to hemostasis and extraction of specimen. It also entails difficulty because of frail nature of spleen and complex.<sup>6</sup>

Clinical assessment begins with a thorough history and examination. The history may elicit symptoms of pressure effects from the enlarged spleen, such as left hypochondrial discomfort or early satiety. There may be symptoms of cytopenias due to hypersplenism: a syndrome comprising splenomegaly; anaemia, leucopenia and/or thrombocytopenia; compensatory bone marrow hyperplasia; and improvement after splenectomy (if performed). General systemic symptoms such as fever, sweats, weight loss or lymphadenopathy suggest haematological, malignant, infectious or inflammatory disease.<sup>7</sup> A thorough systemic enquiry is essential. The present study aimed to assess the cases of splenectomy.

In present study, out of 102 patients, males were 57 and females were 45. We found that hereditary spherocytosis was seen in 45 patients, hypersplenism in 15, multiple splenic cysts in 18, splenic tuberculosis in 10 and splenic hemangioma in 14 patients.

Park et al<sup>8</sup> found that fourteen of 604 patients (1.19%) undergoing splenectomy had intraperitoneal hemorrhage: reoperation was performed in 13 patients, and 3 patients died after reoperation, giving the hospital a mortality rate of 21.43%; whereas, 590 of 604 patients (98%) had no hemorrhage following splenectomy, and the mortality rate (0.34%) in this group was significantly lower. The complications following splenectomy, including pneumonia pancreatitis, gastric fistula, gastric flatulence, and thrombocytosis, in patients with postoperative hemorrhage were significantly higher than those without hemorrhage.

We observed that complications such as hemoperitoneum was seen in 1, pneumonia in 1, wound sepsis in 6 and urinary infection in 2 patients. Targarona et al<sup>9</sup> found that the laparoscopic splenectomy was successfully performed on all 86 patients. No operative complications, such as peritoneal cavity infection, massive bleeding after operation and adjacent organs injured were observed. There was no death related to the operation. The study showed that different operative positions could significantly influence the manipulation of LS. The right lateral position

had more advantages than the lithotomic position and the right recumbent position in LS.

Surgical complications of laparoscopic splenectomy are similar to those for the “open” procedure. Early complications include bleeding, pneumonia, left pleural effusions, atelectasis, and injury to other organs (colon, small bowel, stomach, liver, and pancreas). Late complications include subphrenic abscess, splenic or portal vein thrombosis (or both), failure of the procedure to control the primary disease, recurrent disease as a result of accessory spleens, and OPSI. Independent of any complications inherent to laparoscopic surgery in general (e.g., related to pneumoperitoneum injuries from trocars), LS is associated with several potential perioperative complications that the surgeon should be aware of and be able to treat.<sup>10</sup>

## CONCLUSION

There are various reasons in which laproscopic splenectomy is performed. Authors found hereditary spherocytosis, hypersplenism, multiple splenic cysts, splenic tuberculosis and splenic hemangioma main reasons.

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