

# Incidence of accessory spleen in Bangladeshi cadaver

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## ABSTRACT:

This cross sectional descriptive study was done to find out the incidence of accessory spleen in Bangladeshi people to create awareness of the presence of an accessory spleen in a patient prior to splenectomy. During this study one hundred and twenty human cadaver of which eighty-seven male and thirty- three female of different age group were dissected in the morgue of forensic medicine department of Mymensingh Medical College. This was a cross sectional and descriptive study carried out in the department of anatomy of Mymensingh medical college, from July 2007 to June 2008. Accessory spleen was found in 20% cases where 20.68% cases in male and 18.18% in female.

CBMJ 2012 Jan:Vol 01 No 01: P.17-19

Key words: Accessory spleen, splenunculi, Incidence.

## Introduction

Accessory spleens are also known as supernumerary spleens, splenunculi, splenules or lenculi. These are small detached, roundish nodules occasionally found in the neighborhood of the spleen and are similar to its substance<sup>1,2</sup>. These are congenital foci of healthy splenic tissue that are separate from the main body of the spleen arise from the failure of fusion of the splenic anlage, located between the layers of dorsal mesogastrium, during the fifth week of fetal life<sup>2,3,4</sup>. Their most frequent location is posteromedial to the spleen, along the borders of spleen, especially its anterior aspect, and in the hilum, anterolateral to the upper pole of left kidney and lateral, posterior and superior to tail of pancreas and sometime in the tail of pancreas. They may also occur in the scrotum, greater omentum, transverse mesocolon and gastrosplenic ligament, behind the left lobe of liver<sup>1,2,3,5,6</sup>. The detection and characterization of an accessory spleen are important in three clinical scenarios. First – an accessory spleen may mimic lymphadenopathy and tumours in other abdominal organs such as the pancreas, the adrenal gland and the kidney, second – accessory spleen occasionally may become symptomatic because of torsion, rupture and hemorrhage and cyst formation. Third – a surgeon's awareness of their presence may be important when the intention is to remove all functional splenic tissue (e.g. haematologic disorders) 2. When the spleen is diseased, for example in granulocytic leukemia it may be increased 10 or more times of its normal size and contain large volume of blood which causes anemia, rapid drop of haemoglobin, decreased platelet counts and hypovolemic shock<sup>4</sup>. An enlarged spleen usually associated with various blood diseases which confirm the relation between the spleen and haemopoietic system. In some of these diseases effect of splenectomy made this relationship even more apparent<sup>1</sup>. Although usually asymptomatic and incidentally discovered, they are clinically important to patients<sup>2</sup>.

Awareness of the presence of an accessory spleen is important in a patient evaluated by CT prior to splenectomy. As failure to remove it may result in persistence of the condition that indicated the need for splenectomy. Complication involving an accessory spleen is rare and includes torsion of a wandering accessory spleen or bleeding caused by spontaneous rupture<sup>3,8,9</sup>. An accessory spleen may be of clinical importance as a source of "preservable" splenic tissue in cases of ruptured primary spleen. An accessory spleen can be reliably identified by radionuclide imaging with technetium sulphur colloid if it is 2 cm or greater in diameter<sup>8</sup>. Accessory spleens are approximately 1cm in diameter (ranging from 0.2 – 10cm)<sup>1,2,3,4,5,8</sup>.

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## Methods

The present study was carried out on 120 postmortem human spleens collected from Bangladeshi cadavers of both sexes (male and female) age ranging from birth to 80 years in the department of anatomy of Mymensingh medical college, Mymensingh from July 2007 to June 2008. It was a cross sectional and descriptive study. The specimen for the study were selected from dead bodies that were under gone postmortem examination in the morgue of the department of Forensic medicine of Mymensingh medical college, Mymensingh on above mentioned date and time. The accessory spleens were identified and collected from individual who died within 12- 24 hours and discarded those where any sign of decomposition and rupture. Since no autopsy is done for routine hospital death or other deaths from natural cause in our country, most of the specimen were collected from bodies where cause of death was meidcolegal i.e, road accident, suicidal, homicidal.

The dead bodies were kept on the table in supine position and allotted an identification number. The particulars of the body (age, sex, cause of death) were recorded in a record book against respective specimen number. Abdomen was opened by a classical midline incision and careful examination was done to find out any splenic tissue. Number and position of accessory spleen was observed and collected data were noted in a tabulated form. Data were classified and analyzed by SPSS computer program.

## Result

It was evident from the table I and figure 1 that accessory spleens were present in 20% cases of the total study which was 20.68% cases in male and 18.18% cases in female.

Table I: Incidence of Accessory Spleen.

Sex group	Number of specimen	Present No %	Absent No %	P value
Male	87	18 20.68%	69 79.31%	
Female	33	6 18.18%	27 81.81%	0.746
Total	120	24 20%	96 80%	

## Discussion:

Significance of accessory spleen lies in the fact that, failure to identify and remove these at the time of splenectomy may give rise to persistent of the disease. In the present study 120 spleen were studied to observe the incidence of accessory spleen and found that accessory spleen were present in 20% cases; this incidence was 20.68% in male and 18.18% in female. Rayhan<sup>10</sup> studied with 70 spleens of Bangladeshi cadaver in Dhaka medical college found accessory spleens in 24.28% cases, which is nearer to the Incidence of present study and also similar to the findings of Coetzee<sup>11</sup> where incidence of 11% in case of adults and 25% in case of children without mentioning sex and number of the population. The incidence of present study was within the range but not similar to the findings of Sheldon et al<sup>12</sup> Paterson et al<sup>4</sup> Sica and Reed<sup>6</sup> who found 15%-30% of accessory spleen. In an another study by Alim<sup>13</sup> in 2007 on 60 spleens of Bangladeshi cadaver in sir sallimullaha medical college under Dhaka University , accessory spleen was found in 8.3% cases, which was similar to the findings of Bergman, Afifi and Miyauchi<sup>1</sup>, Mortelet et al<sup>2</sup>, Snell<sup>8</sup>, Schulz et al<sup>14</sup> but lower than the Findings of the present study.



Figure 2: Accessory spleens near the hilum

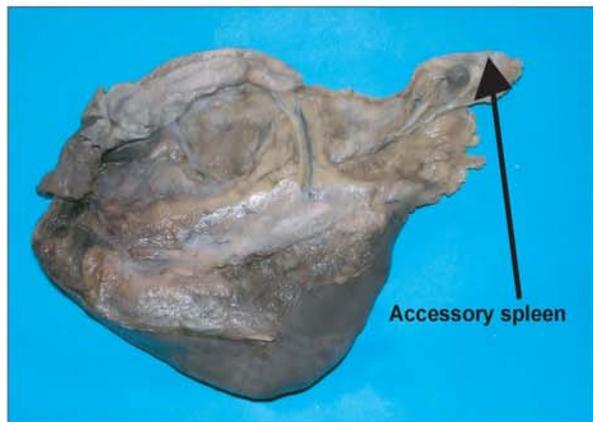


Figure 3: Accessory spleen in gastrosplenic ligament

#### Conclusion:

It is expected that the findings of the present study regarding gross and histomorphologic point of view of accessory spleen will enrich the information pool to establish a Bangladeshi standard in further extensive and sophisticated future study where sample of this study should be large and collected from different parts of the country and the factors should be fixed which will give more accurate results.

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