

Abnormal size, position and relations of spleen

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Citation

S Nayak. *Abnormal size, position and relations of spleen*. The Internet Journal of Biological Anthropology. 2007 Volume 2 Number 1.

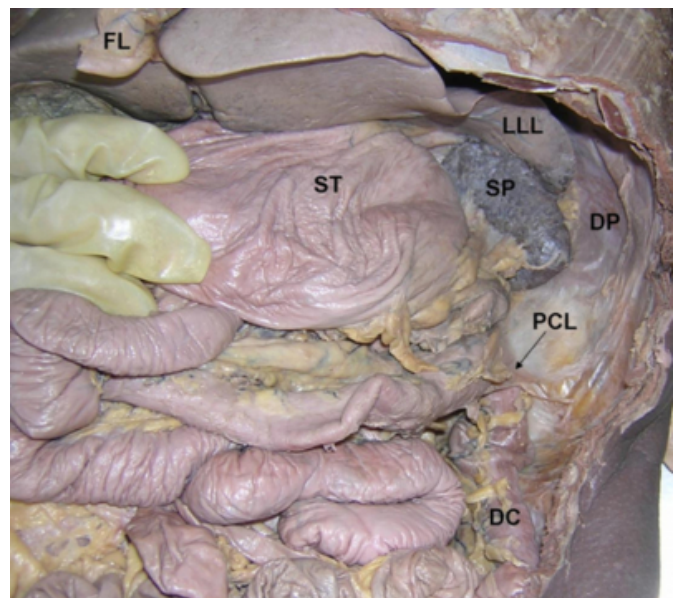
Abstract

The spleen is the largest lymphoid organ of the body. It is situated in the left hypochondriac region of the abdomen. It is about 1 inch thick, 3 inches broad, 5 inches long and weighs approximately 7 ounces. It is wedge shaped or tetrahedral in shape; and has two ends, two surfaces and three borders. Its posterior end rests on the upper pole of the left kidney and anterior end is supported by the phrenicocolic ligament. Its upper border shows characteristic notching. Its diaphragmatic surface is related to the diaphragm which separates it from the left lung, pleura and 9-11th ribs. Its visceral surface is related to the left kidney, stomach, left colic flexure and the tail of the pancreas. Normally, it is not related to the liver directly.

During routine dissections for undergraduate medical students, we found variations in the size, position and relations of the spleen in a cadaver aged approximately 60 years. The spleen was reduced to half its normal size. It was situated much above the level of the phrenicocolic ligament and its posterior surface was adherent to the left lobe of the liver (Figure 1). The left lobe of the liver was larger than the normal. The colic impression on the visceral surface of the spleen was not prominent.

Figure 1

Figure 1: Dissection of the upper abdomen showing the abnormalities of size, position and relations of the spleen.



(SP – spleen, ST – stomach, LLL – left lobe of liver, FL – falciform ligament, DP – diaphragm, PCL – phrenicocolic ligament, DC – descending colon.)

The spleen is a variable organ. It can vary in size, shape and position based on the size and shape of the surrounding viscera. It is a mobile organ, position of which is dependent on the filling of the stomach and the amount of the blood in spleen itself. One of the most common congenital anomalies of the spleen is the presence of accessory spleens in various parts of the abdomen in addition to the main organ₁. The accessory spleens are seen in 10-15% of individuals, out of which 1-2% may be located in the pancreatic tail₂. Retroperitoneal accessory spleens may mimic retroperitoneal tumors with the history of epigastric pain, intermittent nausea and vomiting₃. In current case, the spleen was placed very high in the abdomen and was adhering to the visceral

surface of the left lobe of the liver. The adhesions of the organs are common in abdomen but the adhesion of the spleen to the liver has not been reported yet. This high position and adherence to the liver may no cause problems in the spleen or liver but it could mislead the radiologists and surgeons in general. Most of these anatomic variants have no clinical significance; they need, however, to be recognized by the radiologist as such. Awareness of these variants is important for the radiologist to interpret the findings correctly and avoid mistaking them for a clinically

significant abnormality.

References

1. Gayer G, Hertz M, Strauss S, Zissin R. Congenital anomalies of the spleen. *Semin Ultrasound CT MR.* 2006;27(5):358-369.
2. Weiland G, Mangold G. Accessory spleen in the pancreatic tail - a neglected entity? A contribution to embryology, topography and pathology of ectopic splenic tissue. *Chirurg.* 2003;74(12):1170-1177.
3. Souparis A, Papaziogas B, Alexandrakis A, Koutelidakis J, Paraskevas G, Papaziogas T. An unusual case of retroperitoneal accessory spleen with vascular supply directly from the aorta. *Minerva Chir.* 2002;57(4):513-515.

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