Spatular Extension of Left Lobe of Liver: A Case Report

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ABSTRACT
Anatomical anomalies of the liver and not too common; besides an occasional extra lobe or a hypoplastic right lobe, few records of morphologically aberrant livers have been reported. We herein report a case of an extended spatula shaped left lobe. The lingular prolongation of the left lobe extended right across and below the left dome of the diaphragm and entirely capped the lateral surface of the spleen entirely. A discussion on other records of tongue-shaped extensions of the left lobe is also presented.

Key words: liver lobes, spatulate left lobe, splenovenogram,

INTRODUCTION
The liver is the largest abdominal organ. Situated in the hypochondrium below the right dome of the diaphragm, the liver is made up of two large unequal parts, a larger right and a smaller left lobe, it has two other less obvious lobes, seen better from its visceral surface, the quadrate and caudate lobes. Invested completely with peritoneum, except for a small triangular area on the right lobe’s superior surface, the organ is related to a multiplicity of organs on its visceral surface.

Anatomical dysmorphisms are not common to the organ: an occasional accessory lobe, the Riedl’s lobe has been observed. Hypoplastic right lobes, flattening of the liver and extra lobulations have been reported as some of the anomalies observed in the liver. More rarely, lingular extensions of the left lobe have been recorded. Given the size and physiological role of the organ, the liver is a surprisingly rare site for major anomalies or morphological aberrations.
CASE REPORT

During a gross study of various visceral organs in our department we came across a liver with an unusually elongated spatula-like extension of the left lobe. The tongue like flattened elongation extended far into the right, completely separating the entire diaphragmatic surface of the spleen from the muscle. The inferior surface of the lobe was indented deeply by the spleen, with its lateral edge extending to the level between the ninth and tenth ribs, almost up to the left mid-axillary line and anterior pole of the spleen. In our search for references in literature, although we did not come across a few records of lingular extensions of the left lobe, we did not find any that described the elongation to be as singular as the one we are reporting here (Figures 1, 2, 3 & 4)

![Figure 1: Superior view of liver showing elongated left lobe](image1.png)

![Figure 2: Inferior view of liver showing extension of left lobe with splenic impression](image2.png)

![Figure 3: Inferior view of liver with spleen in position](image3.png)
DISCUSSION

During development, the liver is one of the most precocious embryonic organs and is the centre of haemopoiesis in the foetus. It develops from an endodermal evagination of the foregut and from the mesenchyme of the septum transversum. At three months of gestation, the liver almost fills the abdominal cavity and its left lobe is nearly as large as its right. When haematopoietic activity of the liver is assumed by the spleen and bone marrow, the left lobe undergoes some degeneration and becomes smaller than the right (1).

Other records of left lobar extensions include three cases recorded by Baruah et al (2). Sethi et al (3) describe the radiological diagnosis of a liver with a hypoplastic right lobe with an elongated left lobe. Another description of an extended left lobe found with vascular anomalies was recorded by Chiba et al (4). Nayak S (5) found one liver with extended left lobe out of 55 studied. The liver has been observed to change shape after splenectomy with migration of the left lobe of the liver into the splenic bed in the left upper quadrant is often seen by surgeons immediately after removal of the spleen (6). Despite the abnormal size of enlargement, extended left lobes of the liver do not cause any health issues. Microscopically, the extra tissue has been seen to be normal. Congenital deformities of the liver confined to the left lobe, sufficiently extensive to cause symptoms. In one case were, pressure, pulling, and pain in the epigastrium. Congenital changes in the form of an enlargement of the left lobe are greater than what may occur in the right (7).

In the case we report, the liver extension forms a complete cap for the external surface of the spleen, intervening between the organ and the diaphragms left dome. In our view, the massive extension of the liver, as in this case, could interfere in the approach to the spleen through the left 10th intercostal space for splenovenographic procedures.

Figure 4: Anterior view of liver showing extended left lobe capping spleen separating it from the diaphragm
REFERENCES


3. Sethi SK, Solanki RS. Abdomin Imag 2004; 14(1):53-54. There was enlargement of the left hepatic lobe in a hypoplastic right hepatic lobe liver


