

PARTIALLY FUSED SPLENIC LOBULE- A CASE REPORT

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Abstract:

Spleen is the largest lymphatic organ in humans. It is situated in the left hypochondrium and partly in the epigastrium, between the fundus of the stomach and the diaphragm. It consists of large encapsulated mass of lymphoid and vascular tissues (1). We encountered a case of partially fused splenic lobule in the anterior end with attachment to the main splenic mass through a stalk of splenic tissue. As such, the variation of this kind is rare and had various important clinical implications in the field of surgery, radio diagnosis and gastroenterology.

Keywords: splenic lobule, congenital variation, splenectomy.

Introduction :

The spleen develops from the mesoderm and during its development, different lobules are formed, which fuses with each other later on which is indicated in the form of the lobulations in adult spleen that can be seen on the superior as well as on the inferior borders(2). The number of notches varies from zero to six, but commonly, only one or two notches were seen. During the development of the spleen, small masses of the splenic tissue may become detached from the main mass and may develop into accessory spleens (3). Awareness on the possible presence of the accessory spleen is important as their exclusion during splenectomy, may result in the persistence of the symptoms which indicated it. In this case report, we are presenting a partially fused splenic lobule which may present interpretation errors in diagnostic imaging. The knowledge of this variation is important anatomically, radiologically and surgically.

fused lobule is noted in a male cadaver of about 60 years of age. The superior aspect of the anterior end presents a lobule which is clearly separated from the main mass in its diaphragmatic surface, superior and inferior borders by a deep fissure of 16.8mm depth but connected inferiorly in the visceral surface through a stalk of splenic tissue. (FIGURE.1) A leash of splenic vessels from hilum is noted to enter into this lobule through its postero-inferior aspect. The lobule is 22.1 mm in length, 24.8mm in breadth and 11.3 mm in thickness. The spleen as a whole is 101.5 mm in length, 62.6 mm in breadth and 20.7 mm width. Its superior border presents 2 notches extending into the diaphragmatic surface. No other visible anomalies were found in other viscera of the cadaver. (FIGURE.2)

Discussion:

There is a wide range of congenital anomalies of the spleen. Some are common, such as splenic lobulations and accessory spleen. Other less common conditions, such as wandering spleen and polysplenia, have particular clinical significance. In fetal life, although spleen occurs in a lobulated form, lobules disappear prior to the child birth. In adult spleen, notches are considered as remnants of the grooves from where the fetal lobules have undergone separation (7). In the present case, a lobule in the anterior end had failed to completely fuse with the main mass.

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Case Report :

During routine dissection of medical undergraduates in Yenepoya Medical College, Mangalore, Karnataka; a spleen with an unusual presentation of a partially



Figure.1: Spleen with the lobule at anterior end



Figure 2 : Lobule with splenic vessels

Presence of splenic notches in the same spleen, extending more towards diaphragmatic surface as fissures also points out to defective development of the viscera. Hakkı Muammer Karakas et al 2005[11] studied splenic abnormalities on CT scan and MRI. They found the congenital variations of spleen like asplenia and polysplenia syndrome. Both anomalies were associated with multiple system and organ anomalies including the liver and heart (8). Some research workers [4, 5, 6] reported that the incidence of the accessory spleen to vary from 10 to 35% and they were found at the hilum of the spleen, in the gastro splenic ligament, in the greater omentum, along the pancreas, along the splenic vessels, and in the scrotum also. These congenital variations are important in surgical as well as radiological point of view. Accessory spleen and splenic lobulations can be misinterpreted as neoplasm by endoscopic ultrasound. Although homogenous, they can be hyper echoic or hypo

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echoic (9). The present variation may be misinterpreted as a traumatic injury by the radiologist and it may create confusion in clinical palpation of the enlarged spleen in splenomegaly as it may be misdiagnosed as a growth from the anterior end. Also, it may pose a problem during planning of surgeries and also in laparoscopic interventions. In this modern era of imaging and minimally-invasive approaches, it is imperative on the side of both the radiologists and operating surgeons to have a thorough knowledge of the anatomy and the commonly-occurring variations in this organ.

Conclusion:

This case report presents a rare congenital variation of spleen, the awareness of which would be helpful for imaging specialists and surgeons, to avoid possible errors in interpretations and subsequent misdiagnosis, and also in planning appropriate surgical approaches.