A Case Report on Heteroclitic Quadrate Lobe of Liver and Its Implications

INTRODUCTION

The liver is the largest wedge-shaped gland in the human body. Anatomically it is divided into right lobe and left lobes with quadrate and caudate lobes. Liver is reddish brown in colour and 1600 g weight in males, 1300 g in females. Liver is located in the right hypochondrium, epigastrium, partly extends into left hypochondrium. Features of liver with wedge-shaped, two lobes, five surfaces as anterior, posterior, superior, inferior and right lateral surfaces. Anteriorly right and left lobes are separated by falciform ligament, superiorly separated by ligamentum teres, inferiorly separated by ligamentum venosum. The quadrate lobe is oblong in shape which is situated in the inferior surface which is bounded anteriorly by inferior border of liver, posteriorly by porta hepatis, right side by gall bladder, left side by ligamentum teres (obliterated left umbilical vein). Caudate lobe is situated in the posterior surface of the liver bounded inferiorly by porta hepatis, superiority it continuous with superior surface of the liver, right side by groove for inferior vena cava left side by ligamentum venosum (remnant of ductus venosus). A deep transverse fissure called porta hepatis which is situated in inferior surface of right lobe located between caudate and quadrate lobe where portal vein, hepatic artery, hepatic plexus of nerves enters and hepatic ducts, lymphatics leaves out.

The congenital abnormalities of human liver are rare and these are rarer than almost any other organs of the body. Various congenital abnormalities of the liver as agenesis of its lobes, absence of its segments, deformed lobes, decrease in size of lobes, lobar atrophy, hypoplastic lobes and transposition of the gall bladder, extra caudate lobe and Riedel’s lobe have been reported by various researchers.

MATERIALS AND METHODS

53 – Human cadavers, scissors, cotton, blade scalpel, inch scale, other stationeries.

DISCUSSION

In our routine anatomy dissections, we have found with an abnormalities of the liver having an extra lobe besides the normal right lobe, left lobe, quadrate and caudate lobes. The extra lobe is located between the ligamentum teres and the normal quadrate lobe of the liver hence named as heteroclitic quadrate lobe of the liver (Krupa Daniel et al.). As per review...
of literature the normality and abnormality of liver states the absence of left lobe⁴, fusion of left lobe and quadrate lobe, fusion of right lobe and quadrate lobe, transverse fissure in the quadrate lobe, absence of quadrate and caudate lobes, fusion of caudate lobe and right lobe with the fissure in right lobe of the liver²,⁸,¹⁰,¹¹,¹². Heteroclitic quadrate lobe is located between the quadrate lobe and the ligamentum teres. We assumed that it is a tumour or an outgrowth yet we done with its transverse section and found with its normal anatomy having liver sinusoids without portal triads and peculiarly found with an extra vessel passing through the substance which is the branch from cystic artery hence named as heteroclitic cystic artery (Krupa Daniel et al.). Heteroclitic lobe is triangular in shape with its dimensions – length 3.4 cm, base/breadth 1.8 cm, thickness 1 cm (Figs. 1–9).
RESULTS
Heteroclitic quadrate lobe has been observed towards the left end of quadrate lobe, beside ligamentum teres in our routine dissections. Its shape was triangular in shape with its dimensions of length 3.4 cm from its apex to base, thickness 0.9 cm, base 1.8 cm.

CONCLUSION
These developmental anomalies of liver may cause confusion to clinicians during procedures like biopsy, transplantation and lobectomies. So finding of this new variant under unique configuration of this lobe assumes more importance to anatomists including morphologists, radiologists, surgeons during hepatic segmentations and its knowledge may be of immense use to clinicians in the diagnosis and management of hepatic diseases and to embryologists for new developmental defect. Therefore, it is worth reporting as a new heteroclitic variant.

REFERENCES