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Case Report

ACCESSORY HEPATIC ARTERY - A CASE REPORT

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ABSTRACT

Variations in hepatic artery origin & its distribution are common & should be known to prevent undue complications during and after surgical procedures of liver, such as Acute Liver Failure & augment morbidity. Presenting a case report on anatomical variation of accessory right hepatic artery arising from hepatic artery proper between the origin of right gastric artery and bifurcation of hepatic artery proper to right and left branches.

Keywords: Accessory Hepatic Artery, Hepatic Artery Proper, Acute Liver Failure, Variation.

INTRODUCTION

Variations in hepatic artery are not uncommon. Knowledge of these anatomical variations is essential for clinical applications¹ including surgical and radiological interventions. According to Michels¹, 60% of observations are of classical variations while 40% are of other different anatomical variations. Hepatic artery, branch of celiac trunk, may be divided into two parts;

- 1) Common Hepatic Artery, from celiac Trunk to origin of gastro duodenal artery,
- 2) Hepatic artery proper, from origin of gastro duodenal artery to the bifurcation of hepatic artery.

At close to porta hepatis, Hepatic Artery Proper terminates into right and left hepatic branches which supply right and left lobe liver of respectively. The right hepatic artery gives cystic branch which supplies gall bladder.

CASE REPORT

During routine Peritoneal cavity dissection of female cadaver for undergraduate medical students we found this case, revealing that accessory right hepatic artery arising from hepatic artery proper between origin of right gastric artery and bifurcation of hepatic artery proper to right and left branch and then coursed obliquely upward and entered right free region of lesser omentum behind the common hepatic duct, then reaches infundibulum of gall bladder. It then enters right lobe of liver adjacent to gall bladder, this segment of liver

would be segment V. HAP after arising from Common Hepatic Artery ascended in right free region of lesser omentum, then entered porta hepatis and divides into right and left branches, right branch gave a small cystic branch to gall bladder.

Diameter of accessory hepatic artery was 5mm; twice the diameter of principal right branch of hepatic artery. This signifies that this artery could be significant source for blood supply of right lobe of liver.

DISCUSSION

Origin, incidence & importance of accessory hepatic artery is well reported by Michels¹, Neiderhuber et al², Kemeny et al³, Hiatt et al⁴, Brem et al⁵, Sukhendu et al⁶, & Abdullah et al⁷. Hepatic artery from celiac trunk in 52-76% of individuals, variations of hepatic artery is found in 32-48% of individuals.⁸ The case reported in this study shows a unique variation, which has rarely been reported. Knowledge of variations of hepatic artery is necessary for radiology & surgeries & for complete arterialisation of graft at time of transplantation & also for to prevent undue complication during & after surgical procedures of liver.

CONCLUSION

Accessory hepatic artery arising from Hepatic artery proper is an important source of blood supply to right lobe of liver in this case. The accessory hepatic artery that we are reporting here may also be called as right hepatic artery and the proper

hepatic artery in this case can be called as left hepatic artery which is giving a branch to gall bladder. Based on the anatomical findings of the present study, it may be suggested that surgeons and radiologists need to be aware of the presence of AHA to avoid serious or fatal complications.

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