



A CADAVERIC CASE REPORT ON ACCESSORY RIGHT HEPATIC ARTERY DERIVED FROM SUPERIOR MESENTERIC ARTERY

Anatomy

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ABSTRACT

The Abdominal aorta gives 3 ventral branches:- a) Celiac trunk b) Superior Mesenteric c) Inferior Mesenteric The branches of celiac trunk show no variation. There was Accessory Right hepatic artery present which was originated from Superior mesenteric artery. The Accessory right hepatic artery was bifurcated just before entering anatomical right lobe of liver. It is said to be necessary to take branching pattern of blood vessels into consideration while performing laparoscopic surgery or open surgery of liver, gall bladder & pancreas. Therefore, identification and proper management of hepatic artery variations is critical in surgical procedures to prevent vascular injury.

KEYWORDS

Abdominal aorta, celiac trunk, Right hepatic artery, superior mesenteric artery.

INTRODUCTION

The Abdominal Aorta Gives 3 Ventral Branches:-

- Celiac trunk
- Superior Mesenteric
- Inferior Mesenteric

Celiac trunk latter give origin to Common Hepatic Artery. The Common Hepatic Artery divides into Gastroduodenal and Proper Hepatic Artery.

The Proper Hepatic Artery is divided into Right and Left hepatic arteries, in the hepatic hilum.

An accessory right hepatic artery refers to an additional artery of the right lobe of liver, while a normal branch derives from a proper hepatic artery.

MATERIALS AND METHODS

The study was carried out during routine dissection of a middle-aged man in the Department of Anatomy, B.M.C, Sagar, M.P in month of march-April 2024.

Abdominal dissection was done and the branches of Celiac trunk and Superior mesenteric artery were traced.

Aim And Objectives

To describe abnormal origin of Accessory Right Hepatic Artery as branch of Superior mesenteric artery.

RESULT

The branches of celiac trunk show no variation. There was Accessory Right hepatic artery present which was originated from Superior mesenteric artery. The Accessory right hepatic artery was bifurcated just before entering anatomical right lobe of liver.

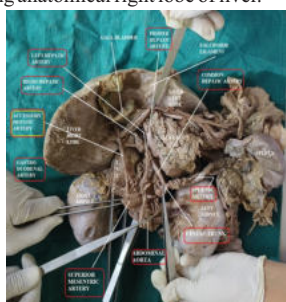


Fig.1:- Abnormal origin of Accessory Right Hepatic Artery as branch of Superior Mesenteric artery

DISCUSSION

During embryonic development; four visceral branches of the aorta with a ventral longitudinal anastomosis are developing, from which the second and third roots and the anastomosis disappear. The first root becomes the coeliac trunk with the left gastric artery, splenic artery, and common hepatica artery branches, while the fourth root becomes the superior mesenteric artery.

However, in case of sustained anastomosis and differential branch reductions, an accessory hepatic artery may be derived; which is likely to be injured during pancreaticoduodenectomy.

Liver transplantation graft vessel injury must be avoided during back-table procedures. Careful attention must be paid to avoid damage of the right anterior hepatic artery.

SUMMARY & CONCLUSION

It is said to be necessary to take branching pattern of blood vessels into consideration while performing laparoscopic surgery or open surgery of liver, gall bladder & pancreas.

Therefore, identification and proper management of hepatic artery variations is critical in surgical procedures to prevent vascular injury.

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Conflicts Of Interest- None

REFERENCES:

1. Bageacu S, Abdelaal A, Ficarella S, ElMeteni M, Boillot O (2011) Anatomy of the right liver lobe: a surgical analysis in 124 consecutive living donors. Clin Transplant 25:E447-E454. <https://doi.org/10.1111/j.1399-0012.2011.01466.x>
2. Dandekar U, Dandekar K, Chavan S (2015) Right hepatic artery: a cadaver investigation and its clinical significance. Anat Res Int 2015:412595. <https://doi.org/10.1155/2015/412595>
3. Hori T, Kirino I, Uemoto S (2015) Right posterior segment graft in living donor liver transplantation. Hepatol Res 45:1076-1082. <https://doi.org/10.1111/hepr.12469>
4. Negoi I, Beuran M, Hostiuc S, Negoi RI, Inoue Y (2018) Surgical anatomy of the superior mesenteric vessels related to pancreaticoduodenectomy: a systematic review and metaanalysis. J Gastrointest Surg 22:802-817. <https://doi.org/10.1007/s11605-018-3669-1>
5. Tandler J (1904) Über die Varietäten der Arteria Coeliaca und deren Entwicklung. Anat Hefte 25:473-500