

Original article:

**Anatomical Variation of the Common Carotid Artery in neck Dissection-
observational study**

¹Dr Mahesh Taru , ²Dr Jeetendra Gour*

¹Department of Anatomy, Malabar Medical College , Calicut , Kerala

²Department of Anatomy, Shree Chatrapati Shivaji Institute of Medical Sciences and Research Center , Mayani ,
Dist . Satara .

Corresponding author *

Abstract:

Introduction: Common carotid arteries chiefly supply the head and neck region. Each common carotid artery bifurcates into external carotid artery (ECA) and internal carotid artery (ICA). According to classical text book description, the carotid arteries run straight in the neck region

Methodology: The present study was conducted in Department of Anatomy for two year duration. 18 in the right and 18 in the left side. of formol-fixed adult cadavers were dissected from Department of Anatomy in routine dissection. The branching pattern variation was observed on the left side of the neck and was unilateral.

Results: In our present study , we found during routine dissection of the neck region of a middle aged female cadaver, the brachiocephalic trunk was found to arise from the arch of the aorta along the left margin of the trachea. The right common carotid arose anterior to the upper trachea and crossed it. The crossing of the upper part of the trachea by the right common carotid artery is a rare occurrence. A more distal branching of the aortic sac during fetal life could explain the anomalous origin of the brachiocephalic trunk. This may lead to an unusual origin and course of the right common carotid artery.

Conclusion: Anatomical knowledge of variations in the origin, course, and branching pattern of the carotid arteries will be useful in angiographic studies, transcatheter embolization procedures.

Introduction:

Common carotid arteries chiefly supply the head and neck region. Each common carotid artery bifurcates into external carotid artery (ECA) and internal carotid artery (ICA). According to classical text book description, the carotid arteries run straight in the neck region (1). Rarely, they show coiling in their course (2). Compared to ECA, ICA more frequently presents such morphological entity (3). Usually, ICA begins at the level of the lamina of the upper border of the thyroid cartilage and enters into the temporal bone. If the distance between these two points is lesser than the vessel length, it leads to coiling, looping and kinking of the vessel (4). However, these conditions are thought to occur due to the benign angiopathy (5) or neurological complications (6) or also considered as congenital anomalies (3). The knowledge of morphological variants of carotid arteries is important while performing procedures such as tonsillectomy, peritonsillar abscess drainage, soft palate impalement injuries, adenoidectomy and velopharyngeoplasty (3). Herein, we report a unilateral variation of both the ECA and ICA in the neck region, and discuss its clinical importance.

Conclusion:

Anatomical knowledge of variations in the origin, course, and branching pattern of the carotid arteries will be useful in angiographic studies, transcatheter embolization procedures.

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Original article:

Evaluation of branching pattern of hepatic artery proper and their importance: A cadaveric study

¹Dr Jeetendra Gour , ²Dr Mahesh Taru*

¹Department of Anatomy, Shree Chatrapati Shivaji Institute of Medical Sciences and Research Center, Mayani, Dist. Satara.

²Department of Anatomy, Malabar Medical College, Calicut, Kerala

Corresponding author *

Abstract:

Introduction: The incidence of normal hepatic arterial anatomy ranges between approximately 50-80% of individuals. Knowing anomalous origin of hepatic arteries is important for successful cholecystectomy, hepatobiliary and liver transplant surgery.

Materials and methods: The present cadaveric study was planned and work was conducted in our department. Routine dissection of 18 cadavers in the department of anatomy, for first year M.B.B.S. students was done.

Observations: The right hepatic artery was found to enter the cysto-hepatic triangle; by passing dorsal to the common hepatic duct in 82% cases. In 4% cases the artery crossed ventral to common hepatic duct and then turned upward, between the cystic and right hepatic ducts to enter the right lobe of liver. However in 10% cases, the right hepatic artery was situated to the right of common hepatic duct.

Conclusion: It was random study conducted to observe the arterial pattern supplying the extra hepatic biliary apparatus. A good knowledge of arterial system of liver and extra hepatic biliary apparatus, distribution and possible anatomical variation is important for surgeons, radiologists and clinicians as it is significant in liver transplantation in order for the vascularity not to be disturbed and necrosis of liver parenchyma postoperatively, nonestablishment of continuity in time of reconstruction is important because of post operative complication such as acute liver failure which can augment morbidity and mortality.

Keywords: hepatic artery, hepatic surgery

Introduction:

Hepatic arterial anomalies are not rare. A large number of studies have been undertaken on variant patterns of aberrant hepatic arteries because of its high surgical relevance. Some studies have shown the incidence of aberrant hepatic arteries to be as high as almost 50%. ¹All the studies done earlier were on aberrant origin of hepatic artery and we did not find any report on abnormal branching pattern of the artery. ²During routine dissection we had this accidental finding of abnormality in branching pattern of the hepatic artery with altered relations and course of its branches. A comprehensive understanding of common and uncommon variations in hepatic arterial system is very much essential for the surgeons to avoid any potentially disastrous complication. Knowledge on this abnormal anatomy will be helpful to avoid injuring the arteries during surgeries like pancreaticoduodenectomy in patients with ampullary tumor. ³

prior to an operative procedure or transcatheter therapy; chemoembolization of pancreatic and liver tumors. Careful identification and dissection of celiac trunk branches is therefore important to avoid iatrogenic injury. Normal variations are important to be demonstrated angiographically before any hepato biliary pancreatic and liver transplantation surgery, because accidental ligation of aberrant hepatic arteries may result in hepatic necrosis, ischemic biliary injury, graft injury or breakdown of biliary enteric anastomosis.⁸

Conclusion:

It was random study conducted to observe the arterial pattern supplying the extra hepatic biliary apparatus. A good knowledge of arterial system of liver and extra hepatic biliary apparatus, distribution and possible anatomical variation is important for surgeons, radiologists and clinicians as it is significant in liver transplantation in order for the vascularity not to be disturbed and necrosis of liver parenchyma postoperatively, nonestablishment of continuity in time of reconstruction is important because of post operative complication such as acute liver failure which can augment morbidity and mortality.

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