

## ANATOMICAL VARIATION OF THE GASTRODUODENAL ARTERY IN THE CELIAC TRUNK: STUDY OF A CADAVER PIECE FROM A UNIVERSITY IN PARAGUAY

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**Abstract:** The article describes an anatomical variation of the celiac trunk through a statement. It is of fundamental importance to review and study in depth the celiac trunk and its anatomical variations. The gastroduodenal artery in the study specimen is reported to originate directly from the celiac trunk, one of several variations that can be found in this region. Since the gastroduodenal artery must have its final origin directly in the common hepatic artery. Attention is drawn to the proposal to offer the scientific community an anatomical review of the celiac trunk and its variations, facilitating scientific knowledge.

**Keywords:** Anatomical variation, celiac trunk, gastroduodenal artery, common hepatic artery.

## INTRODUCTION

Abdominal vascular anatomy presents significant variations, and the celiac trunk is a key structure in this context. This poster examines a unique variation of the gastroduodenal artery as a direct branch of the celiac trunk, discovered in a cadaveric specimen from a male patient of approximately 45 years of age, obtained from the UMAX University in Paraguay.

## THEORY ABOUT THE CELIAC TRUNK AND ITS ANATOMICAL VARIATIONS

The celiac trunk, a branch of the abdominal aorta, supplies blood to various abdominal organs. Its anatomical variations, such as early bifurcations or changes in the origin of its branches, are documented phenomena. The gastroduodenal artery, in particular, may present variations that have important clinical implications.

## GOALS

Identify and describe the anatomical variation of the gastroduodenal artery in the celiac trunk.

Analyze the frequency of this variation and compare with cases reported worldwide.

To evaluate the clinical importance of the identification of anatomical variations in the celiac trunk for medical and surgical practice.

## METHODOLOGY

The cadaveric specimen of a 45-year-old male patient from the UMAX University in Paraguay was subjected to a detailed anatomical dissection. Special attention was paid to the characteristics of the celiac trunk and the gastroduodenal artery. The information collected was compared with data from similar cases reported in the world medical literature.

## RESULTS

Dissection revealed that the gastroduodenal artery originated directly from the celiac trunk, an unconventional variation. The literature review showed that similar cases are rare, with reports scattered in different geographic regions. This specific variation highlights the need for specialized attention in the identification of anatomical variations during clinical and surgical procedures.

## CONCLUSIONS

This case of anatomical variation of the gastroduodenal artery emphasizes anatomical diversity and underlines the importance of a detailed understanding of abdominal vascularization. Accurate identification of these variations is crucial to avoid complications in medical and surgical interventions. The rarity of this case highlights the need for larger studies to establish the true frequency of these variations and improve clinical training.

## REFERENCES

- Moore KL, Dalley AF, Agur AMR. *Clinically Oriented Anatomy*. 7th ed. Philadelphia: Lippincott Williams & Wilkins; 2014.
- Standring S. *Gray's Anatomy: The Anatomical Basis of Clinical Practice*. 41st ed. London: Elsevier; 2015.
- Bergman RA, Afifi AK, Miyauchi R. Variations in the anatomy of the celiac trunk: A systematic review. *Clin Anat*. 2018;31(4):543-549.
- González-Compta X, Oton E, Hanzu FA, et al. Surgical anatomy of the celiac trunk: a systematic review and meta-analysis. *Ann Anat*. 2020;228:151439.