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Case Report

Unique partial duplication of the left ovarian vein: A case report ☆,☆☆

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ABSTRACT

Partial duplication of the left ovarian vein is an extremely rare anatomical variation with significant clinical implications. We report the case of a 52-year-old female with no significant medical history, presenting with a 2-month history of vague upper abdominal pain. A diagnostic abdominal CT scan revealed an incidental finding of partial duplication of the left ovarian vein. The vein was enlarged, measuring 8 mm in diameter, and displayed a unique bifurcation at the lower end of the L4 vertebra, reuniting at the upper endplate of the L3 vertebra. Additionally, a short 4 mm segment connected the duplicated mid-segments. This case underscores the importance of thorough imaging and evaluation in identifying rare vascular anomalies, which can have significant implications for diagnosis and management.

Introduction

The ovarian veins are responsible for draining the blood from the ovaries. The right ovarian vein typically empties directly into the inferior vena cava, while the left ovarian vein drains into the left renal vein [1]. Anatomical variations of these veins are unusual, and there are a limited number of reported cases in the literature. These variations include complete and partial duplication of the ovarian vein on either side [2,3]. Complete duplication refers to the presence of 2 ovarian veins, while partial duplication is a more flexible term that can encompass various cases with differing anatomical presentations.

This case report documents a unique instance of partial duplication of the left ovarian vein discovered in a 52-year-old female patient during routine diagnostic imaging. Such vascular anomalies, although infrequent, can pose challenges in accurate diagnosis and management, especially in conditions like pelvic congestion syndrome, varicose veins, and during gynecological surgeries. Recognizing and understanding these variations is essential for healthcare professionals to avoid

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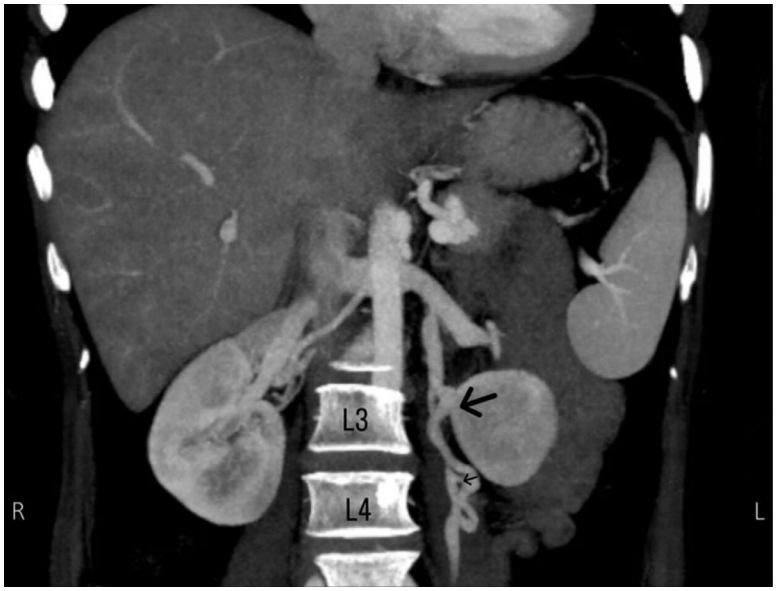

Fig. 1 – CT scan image showing the unique partial duplication of the left ovarian vein. The black arrow points to the duplicated mid-segment of the vein, while the short black arrow indicates the 4 mm connecting segment. The vein is enlarged, measuring 8 mm in diameter, with bifurcation at the lower end of the L4 vertebra and reuniting at the upper endplate of the L3 vertebra.

misdiagnosis and ensure proper surgical planning and intervention.

Case presentation

In this case report, we present a 52-year-old female with no significant medical history who presented with a 2-month history of intermittent upper abdominal pain. Her pain was partially related to food intake but was not associated with nausea or vomiting. The initial workup, which included comprehensive laboratory tests and an abdominal ultrasound, was unremarkable and failed to provide a definitive diagnosis.

Consequently, an abdominal CT scan was performed for further evaluation. The CT scan revealed an enlarged left ovarian vein, measuring 8 mm in diameter. Additionally, a unique anatomical variation was identified on the scan. Specifically, the mid left ovarian vein exhibited partial duplication: at the level of the lower end of the L4 vertebra, the vein bifurcated into 2 distinct branches. These branches then reunited into a single vein at the level of the upper endplate of the L3 vertebra. Moreover, a short 4 mm segment was observed connecting the duplicated mid segments of the vein (Fig. 1).

Despite these anatomical findings, the CT scan was not informative regarding the patient's symptoms, and the enlargement and variation of the ovarian vein were deemed incidental and not directly related to her pain. To further investigate the cause of her unspecified upper abdominal pain, an upper endoscopy has been scheduled.

These findings illustrate a rare instance of partial duplication of the left ovarian vein with specific anatomical characteristics. This case underscores the complexity and variability of vascular anatomy in clinical practice.

Discussion

Ovarian vein anatomical variations are rare. Among the documented cases, Abrantes et al. [4] reported a 37-year-old female with a history of ovarian vein thrombosis who was found to have a completely duplicated right ovarian vein. This type of duplication has been reported on the left side as well. Lalwani et al. [5] reported a case of complete duplication of the left ovarian vein during their cadaveric study.

Duplication can also be partial, as seen in Ghosh et al. [2] case, they reported an 85-year-old cadaver found to have a partially duplicated left ovarian vein. In this case, the vein bifurcated 4 cm distal to its termination at the left renal vein, with the termination sites separated from each other on the left renal vein. Forte et al. [6] reported a similar case during cadaveric dissection, in which the partially duplicated left ovarian veins joined before the final drainage. However, it differed in that the final destination was the inferior polar renal vein.

Muo et al. [7] summarized almost all reported cases of ovarian vein duplication and described his case, which demonstrated partial duplication of the left ovarian vein, with the 2 veins joining 2.2 cm inferior to the left renal vein.

In our case, the partial duplication was unique, as only the mid portion of the left ovarian vein was duplicated. The vein bifurcated at the level of the lower end of the L4 vertebra and

reunited into a single vein at the upper endplate of the L3 vertebra before inserting into the left renal vein.

Conclusion

This case report highlights a unique partial duplication of the left ovarian vein in a 52-year-old female with upper abdominal pain. The duplication involved the mid-portion of the vein, which bifurcated at the lower end of L4 and reunited at the upper end of L3, with a short 4 mm connecting segment. This case underscores the importance of thorough imaging and evaluation in identifying rare vascular anomalies.

Ethical approval

This case report is exempt from ethical approval in our institute.

Patient consent

Written consent was obtained from the patient for the publication of anonymized information in this article.

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