

Concurrent Superior Mesenteric Artery and Nutcracker Syndromes in an Adolescent Female: A Rare Vascular Compression Case

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ABSTRACT

Superior Mesenteric Artery Syndrome (SMAS) and Nutcracker Syndrome (NCS) are rare vascular compression disorders that may present with nonspecific gastrointestinal symptoms. Their coexistence is exceptionally uncommon. A 17-year-old female presented with a five-month history of chronic dyspepsia, postprandial vomiting, and epigastric pain. Despite completing *Helicobacter pylori* eradication therapy, her symptoms persisted. She had unintentional weight loss of 2 kg and a BMI of 19.62 kg/m², with no urinary symptoms. Multislice CT angiography revealed a decreased aortomesenteric angle of 20° and a distance of 0.5 cm with proximal duodenal dilation, consistent with SMA syndrome. Left renal vein compression with a ratio of 2.7 confirmed Nutcracker syndrome. This case emphasizes the importance of considering vascular etiologies in adolescents presenting with unexplained upper gastrointestinal symptoms, even with modest weight loss. Comprehensive imaging and attention to aortomesenteric measurements and left renal vein morphology are crucial for prompt diagnosis.

Keywords: Adolescent, Body Mass Index, Computed Tomography Angiography, Nutcracker Syndrome, Superior Mesenteric Artery Syndrome, Weight Loss

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