EJCRIM
European Journal
of Case Reports
in Internal Medicine

SLIPPING RIB SYNDROME PRESENTING AS POSTPRANDIAL NAUSEA: A DIAGNOSTIC CHALLENGE IN INTERNAL MEDICINE

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Received: 12/04/2026
Accepted: 13/04/2026
Published: 11/05/2026

Conflicts of Interests: The Authors declare that there are no competing interests.
Patient Consent: Written informed consent was obtained from the patient.
Acknowledgments: The authors thank the colleagues involved in the clinical care of the patient.
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How to cite this article: Botusanu VM, Ursu CI. Slipping rib syndrome presenting as postprandial nausea: a diagnostic challenge in internal medicine. *EJCRIM* 2026;**13**:doi:10.12890/2026_006756

ABSTRACT

Slipping rib syndrome is an under-recognised cause of thoracoabdominal pain that may present with atypical symptoms, leading to diagnostic delay. We report the case of a 23-year-old woman who presented with severe postprandial nausea as her dominant symptom, accompanied by episodic vomiting and unintentional weight loss. Extensive gastrointestinal and spinal investigations were unrevealing, and symptoms were subsequently interpreted as functional or psychosomatic. Careful clinical examination and targeted imaging ultimately identified slipping rib syndrome involving the eleventh right rib. Surgical resection of the mobile cartilaginous rib segment resulted in complete and sustained resolution of symptoms. This case highlights the importance of considering musculoskeletal causes in patients with unexplained gastrointestinal symptoms to avoid misdiagnosis and unnecessary investigations.

KEYWORDS

Slipping rib syndrome, postprandial nausea, thoracoabdominal pain, diagnostic delay, musculoskeletal disorder

LEARNING POINTS

- Slipping rib syndrome may present predominantly with gastrointestinal symptoms such as postprandial nausea, leading to diagnostic delay.
- Reproducible mechanical symptoms on examination are key to diagnosis, and normal imaging does not exclude the condition.
- Surgical resection can provide definitive symptom relief in selected patients with persistent symptoms.

INTRODUCTION

Slipping rib syndrome is a musculoskeletal condition caused by hypermobility of the anterior cartilaginous portion of the lower ribs, most commonly involving the eighth to twelfth ribs. Irritation of the intercostal nerves may result in pain radiating to the chest, abdomen or back[1,2]. Despite being described nearly a century ago, the condition remains frequently overlooked in clinical practice.

EFIM
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smc media srl

Clinical presentation is often non-specific and may include thoracoabdominal pain, clicking sensations and, less commonly, gastrointestinal symptoms such as nausea[3]. When gastrointestinal symptoms predominate, patients frequently undergo extensive investigations before diagnosis. Consequently, symptoms may be misattributed to functional or psychosomatic disorders, particularly in young patients with normal imaging[1,2].

Although atypical presentations have been described, postprandial nausea as the dominant symptom leading to weight loss appears uncommon, making recognition challenging[2,3].

CASE DESCRIPTION

A 23-year-old Caucasian woman presented at the end of January with a 4-week history of progressive postprandial nausea and right-sided upper abdominal pain. Overall, there was a diagnostic delay of approximately 4 months between initial presentation and definitive diagnosis.

Nausea occurred consistently after meals and was the most distressing symptom. Large meals frequently triggered nausea, occasionally followed by vomiting. To minimise symptoms, the patient progressively reduced her food intake, resulting in an unintentional weight loss of approximately 4 kg over the following months. Symptoms were exacerbated by movement, deep inspiration and prolonged sitting. There were no bowel habit changes, fever or gastrointestinal bleeding. Pain was rare and mild, presenting as discomfort beneath the right costal margin, with occasional posterior radiation to the lower thoracic spine. Her medical history was notable for blunt thoracic trauma following a horseback riding accident 1 year earlier. She was not taking any regular medication prior to symptom onset and did not smoke, consume alcohol or use recreational drugs. Her family history was unremarkable for gastrointestinal pathology.

Between February and mid-May, repeated evaluations focused on gastrointestinal, hepatobiliary and spinal causes. Laboratory tests, including inflammatory markers, liver enzymes and biliary parameters, were within normal limits. Abdominal ultrasound showed no evidence of cholelithiasis, biliary obstruction or other hepatobiliary pathology, making a biliary cause of postprandial symptoms unlikely. Upper gastrointestinal endoscopy demonstrated mild, non-specific gastritis. Histological examination of gastric and duodenal biopsies showed no evidence of *Helicobacter pylori* infection or coeliac disease, with negative stool testing and serology further supporting these findings. Given the non-specific nature of these findings and the lack of response to proton-pump inhibitor therapy, gastritis, gastroesophageal reflux disease, and peptic ulcer disease were considered non-specific and not sufficient to explain the patient`s symptoms. Colonoscopy was macroscopically unremarkable, and random biopsies demonstrated normal mucosa.

Pregnancy and gynaecological causes were also considered; multiple pregnancy tests were negative, and a routine gynaecological examination was unremarkable. Cannabinoid hyperemesis syndrome was considered but deemed unlikely due to negative toxicology and the absence of symptom relief with hot showers[4]. Renal causes were considered in the differential diagnosis but were not supported because of the absence of urinary symptoms, normal urinalysis, and radiologically normal urogenital anatomy. Spinal pathology was excluded by magnetic resonance imaging, which showed no evidence of disc herniation, nerve root compression or other structural abnormalities. Despite extensive investigations and initial conservative management with limited effect, including multimodal analgesia, antiemetic therapy and physiotherapy, symptoms persisted and were increasingly attributed to functional or psychosomatic causes.

The exacerbation of symptoms with movement and posture was not consistent with a primary gastrointestinal disorder and ultimately prompted a focused musculoskeletal examination, which revealed a mobile segment of the eleventh rib, with palpation reproducing pain and inducing nausea; the hooking manoeuvre elicited a palpable click. Dynamic musculoskeletal ultrasound confirmed abnormal mobility of the cartilaginous portion of the rib with reproducible displacement[5]. These findings supported the diagnosis of slipping rib syndrome.

Given persistent symptoms, associated weight loss and the presence of a reproducible mechanical trigger, further treatment options including intercostal nerve blockade and surgical resection were discussed. Surgical management was chosen due to the identifiable structural abnormality and high reported success rates[6]. In early June, approximately 6 cm of the cartilaginous portion of the eleventh rib was resected.

Postoperatively, the patient reported immediate resolution of postprandial nausea and was able to resume normal oral intake. At follow-up at 6 weeks and 6 months, she remained completely symptom-free without recurrence or need for medication.

DISCUSSION

Slipping rib syndrome is a frequently overlooked cause of thoracoabdominal pain due to hypermobility of the lower ribs and intercostal nerve irritation[1,2]. Gastrointestinal manifestations such as nausea are increasingly recognised but remain poorly understood[3,4]. This case highlights an atypical presentation in which postprandial nausea dominated, directing initial evaluation toward gastrointestinal causes. Extensive negative investigations, including endoscopy with biopsies and colonoscopy, illustrate how patients may undergo repeated testing before a musculoskeletal cause is considered. The prominence of nausea as the leading symptom, resulting in weight loss and diagnostic delay, is unusual. Although atypical presentations exist, gastrointestinal-dominant cases remain uncommon[1,2].

The mechanism of nausea is unclear. A possible explanation is that postprandial gastric distension may exacerbate irritation of the hypermobile rib segment, triggering neural and autonomic pathways that lead to nausea.

Diagnosis is primarily clinical, based on symptom reproduction[1,2]. Dynamic ultrasound can support diagnosis by demonstrating abnormal mobility[5]. Surgical resection provides effective symptom relief in selected patients[6]. Early recognition of this condition may prevent unnecessary investigations and reduce the risk of misclassification as psychosomatic disease.

REFERENCES

1. McMahon LE. Slipping Rib Syndrome: A review of evaluation, diagnosis and treatment. *Semin Pediatr Surg* 2018;**27**:183-188. doi: 10.1053/j.sempedsurg.2018.05.009
2. Madeka I, Alaparthi S, Moreta M, Peterson S, Mojica JJ, Roedl J, et al. A Review of Slipping Rib Syndrome: Diagnostic and Treatment Updates to a Rare and Challenging Problem. *J Clin Med* 2023;**12**:7671. doi: 10.3390/jcm12247671
3. Heinz GJ, Zavala DC. Slipping Rib Syndrome: Diagnosis Using the "Hooking Maneuver". *JAMA* 1977;**237**:794–795. doi: 10.1001/jama.1977.03270350054023
4. Sorensen CJ, DeSanto K, Borgelt L, Phillips KT, Monte AA. Cannabinoid hyperemesis syndrome: diagnosis, pathophysiology, and treatment—a systematic review. *J Med Toxicol* 2017;**13**:71–87. doi:10.1007/s13181-016-0595-z
5. Van Tassel D, McMahon LE, Riemann M, Wong K, Barnes CE. Dynamic ultrasound in the evaluation of patients with suspected slipping rib syndrome. *Skeletal Radiol* 2019;**48**:741–751. doi: 10.1007/s00256-018-3133-z
6. Mazzella A, Fournel L, Bobbio A, Janet-Vendroux A, Lococo F, Hamelin EC, et al. Costal cartilage resection for the treatment of slipping rib syndrome (Cyriax syndrome) in adults. *J Thorac Dis* 2020;**12**:10–16. doi: 10.21037/jtd.2019.07.83