Abdominal Injury-Induced Gastric Outlet Obstruction in Primary Hypertrophic Pyloric Stenosis in Adolescent

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Hypertrophic pyloric stenosis (HPS) usually presents in infant with upper gastrointestinal obstruction as the main symptom [1]. However, HPS can also occur later in life. Several theories include HPS secondary to other gastrointestinal pathology and persistent mild manifestation of a juvenile form into adulthood [2]. Most of adult-onset HPS is secondary to carcinoma or peptic ulcer [3].

We undertook a unique case of primary HPS induced by abdominal injury in an 11-year-old girl. The patient appeared wasted, with 3-month history of post-prandial vomiting. Fever and abdominal pain were denied. Preceding the symptoms, patient had an accident where she was hit on the epigastrium area. Contrast examination revealed 3-cm gastric stenosis, and endoscopic examination showed complete pyloric obstruction

with erythematous antrum mucosa. Upon CT, circular hypertrophic pylorus was found.

We performed resection of pylorus to a success; patient was discharged 2 weeks post-operation and remained asymptomatic up to 14 weeks of follow-up. The result of histopathological examination revealed the following: hyperplasia and hypertrophy of muscularis mucosa, irregular nerve bundles with dysplasia of ganglion cells, and fibrosis with infiltration of chronic inflammatory cells.

Interestingly, both components of primary HPS (hypertrophic of circular muscle fibers, and irregular nerve bundles) and secondary HPS (fibrous tissue) were present. Given that our patient's symptoms started at 11 years old following trauma in the epigastrium region, we think that the late-onset of primary HPS in this patient could be induced by inflammation. This might promote the severity of gastric outlet obstruction in primary HPS.

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References

1. Aspelund G, Langer JC (2007) Current management of hypertrophic pyloric stenosis. *Semin Pediatr Surg* 16:27–33
2. Hellan M, Lee T, Lerner T (2006) Diagnosis and therapy of primary hypertrophic pyloric stenosis in adults: case report and review of the literature. *J Gastrointest Surg* 10:265–269
3. Keynes WM (1965) Simple and complicated hypertrophic pyloric stenosis in the adult. *Gut* 6:24–52

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