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# Henoch-Schönlein purpura presenting as organic gastric outlet obstruction case report

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**Abstract**
Henoch-Schönlein purpura (HSP) is an acute small vessel vasculitis. It is the most common vasculitis in children, with an annual incidence of about 10 cases per 100.000 children. Although gastrointestinal manifestations are common, gastric outlet obstruction is never reported. The authors present the case of a 13-y-old boy having coffee ground vomitus, melenic stools and pyloric stenosis. Improvement of symptoms was achieved by conservative management with steroid therapy and gastric decompression.

**Keywords:** Henoch-Schönlein, organic gastric, vasculitis, children

## Introduction
Henoch Schönlein Purpura (HSP) is the most common childhood systemic vasculitis, characterized by the combination of non-thrombocytopenic palpable purpura, arthritis or arthralgias, gastrointestinal and renal involvement.
The small vessel vasculitis is produced by the antigen-antibody (IgA) complexes that activate the alternate complement pathway, even if the causes remain unknown.
Gastrointestinal symptoms, mainly colicky abdominal pain, vomiting and gastrointestinal bleeding, are present in 50–75 % of patients with HSP [1]. Gastrointestinal bleeding is usually occult, but a minority of patients may have grossly bloody or melenic stools. Duodenum and small intestine are the most frequently involved sites [2].

## Case Report
A 13 years old child hospitalized for an episode of coffee ground vomitus and epigastric pain; he had no history of drug use, fever, pain and skin lesions.
On physical examination the patient was pale even if the hemoglobin level was normal (13 gm/dL); the other routine blood tests and urine analysis were normal.
The night after the hospitalization two episodes of coffee ground vomitus occurred, followed by melenic stools.
An abdominal ultrasound showed a thickening of the walls of the gastric antrum.
The CT scan disclosed the presence of a circumferential stenosis of the gastric antrum (about 28 mm of diameter) involving the pylorus (fig 1) and the study with gastrografin meal confirmed a severe gastric outlet obstruction (fig 2).
The scheduled upper gastrointestinal endoscopy was not performed because during the second day of hospitalization, skin petechiae and palpable purpura, symmetrically distributed over the extensor surfaces of the lower limbs, appeared leading to the diagnosis of submucosal hematoma of the gastric antrum caused by Henoch-Schönlein purpura.
Nasogastric tube was placed and a therapy with corticosteroid (2 mg/kg/d i.v.) and proton-pump inhibitor (pantoprazole 40 mg/d i.v.) was started.
Within 4 days, there was the complete resolution of the clinical symptoms, i.e. skin rash and gastric outlet obstruction that was confirmed by a second gastrografin meal.

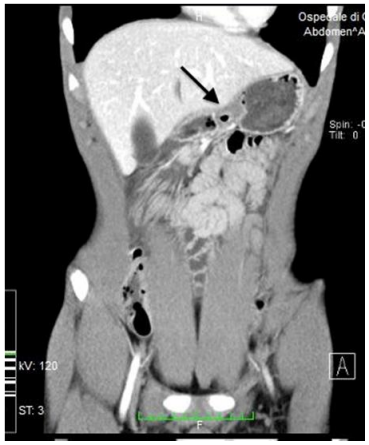


**Fig 1:** Computed tomographic scan of the abdomen. Coronal image shows the thickening of the antrum wall of about 2 cm (arrow). The normal antrum wall usually has a thickness of 5 mm or less.

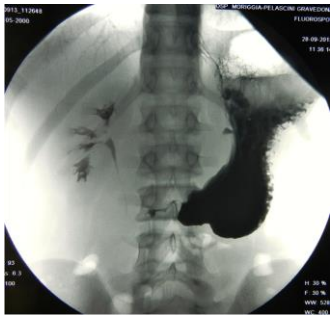

**Fig 2:** Gastrografin meal shows a dilated stomach, a complete gastric outlet obstruction and the string sign (Kantor's sign), that is the string-like appearance of the antrum caused by a severe narrowing.

## Discussion

The diagnosis of HSP is made if at least two of the following four criteria are present:

1. Age < 20 years at onset
2. Palpable purpura
3. "Bowel angina" (diffuse abdominal pain or bowel ischaemia usually with bloody diarrhoea)
4. Biopsy evidence of granulocytes in the walls of arterioles or venules [3].

Laboratory tests are complementary in assessing renal involvement (urinalysis, urine microscopy, serum creatinine), and imaging studies are helpful in the evaluation of abdominal involvement and complications (intussusception).

In children with incomplete or unusual presentation, biopsy of the affected organ (skin, kidney) is mandatory to confirm the diagnosis [4].

Gastrointestinal bleeding is usually occult and occurs in 18–52% of the patients. However, in some cases, melena may be the main symptom [5].

Gastrointestinal involvement precedes the cutaneous manifestations in 25% patients [6].

Gastrointestinal symptoms are originated by deposition of immune complexes in vessel walls, which leads to inflammation and hemorrhage [7].

Sometimes symptoms may mimic an acute surgical abdomen although abdominal complications, like perforation, intussusception or infarction, may happen [8].

In most of the cases the microvascular lesions of HSP affect the small intestine and rarely the upper gastrointestinal tract.

In these cases the upper endoscopy shows diffuse mucosal redness, small ring-like petechiae and hemorrhagic erosions of the gastric and duodenal mucosa [9], while gastric and duodenal ulcers are rare.

In HSP the second portion of the duodenum is typically more involved than the first.

The exclusive involvement of the stomach and duodenum, causing A0n hemorrhagic and ulcerative gastritis and duodenitis, is an extremely rare presentation of HSP [10].

## Conclusions

The case reported by M. Rathore *et al*. [11] is a functional gastric outlet obstruction, caused by multiple duodenal ulcers.

Therefore the case reported is the first case of organic gastric outlet obstruction caused by a submucosal gastric antrum hematoma related to HSP that preceded the characteristic cutaneous manifestations of HSP, which were necessary to make the diagnosis.

Pyloric stenosis was resolved with non-surgical management [12].

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