

# A Young Patient With Severe Haemophilus Influenzae Infection Presents with Acute Abdominal Pain

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## Case Presentation

A 21-year old woman with medical history significant for lack of childhood immunizations was admitted to a local ED with infectious supraglottitis and bacteremia secondary to *Haemophilus Influenzae* serotype b (Hib). She was initiated on ampicillin/sulbactam and Ceftriaxone and transferred for ENT-specific care.

Three days post transfer, the patient noted acute epigastric and peri-umbilical abdominal pain without radiation that did not respond to conservative treatment.

## Labs were notable for:

- Elevated lipase, 9,856 U/L (Ref 152 - 353 U/L)
- Elevated white blood cell count, 20.31 K/cu mm (Ref 3.5 0 10.80 K/cu mm)
- Acute kidney injury, Cr 1.69 mg/dL from a baseline of 1.0 mg/dL (Ref 0.6 - 1.1 mg/dL)
- Normocytic anemia requiring transfusion, 6.7 g/dL (Ref 12.0 - 16.0 g/dL)
- Macroscopic hematuria, 108 red cells/hpf (Ref 0 - 3 cells/hpf)
- Elevated urine protein/cr, 2.98 (Ref <0.10)
- Elevated CRP 102 mg/L (Ref < 10.0 mg/L)
- Decreased C3 & C4, 3 mg/dL (Ref 16 - 47 mg/dL), 36 mg/dL (Ref 88 - 201 mg/dL)
- Positive ANA antibody
- Positive double-stranded DNA antibody

## Physical Exam and Imaging revealed:

- Malar Rash (**Figure 1**)
- No evidence of bleeding
- Worsening abdominal pain with palpation
- Evidence of acute pancreatitis on CT abdomen (**Figure 2**)

A renal biopsy was performed with results consistent with diffuse active and membranous lupus nephritis (**Figure 3**). The patient's presentation was representative of a new diagnosis of systemic lupus erythematosus.

The patient received fluid resuscitation and multimodal pain control for acute pancreatitis and promptly initiated a steroid taper with mycophenolate mofetil with resolution of abdominal pain, AKI, and hematuria prior to discharge home.



**Figure 1: Malar Rash**

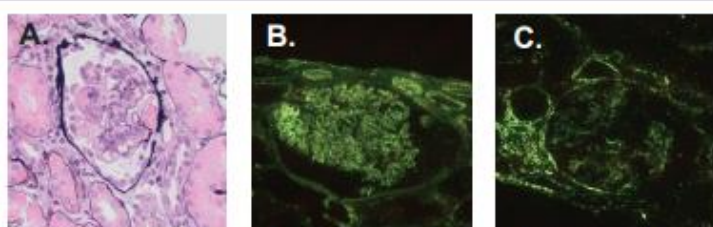
Photograph of presenting malar rash that involves bilateral cheeks and spares nasolabial folds.



**Figure 2 : CT-Evidence of Acute Pancreatitis**

**Figure 2A.** Diffusely enlarged pancreas with edema of the pancreatic head and surrounding stranding and fluid.

**Figure 2B.** Ascites in the pelvis, larger than expected for uncomplicated pancreatitis. Hepatic steatosis and mesenteric edema are also present.



**Figure 3: Kidney biopsy showing diffuse active and membranous lupus nephritis**

A representative glomerulus on light microscopy shows glomerular capillary wall "holes" were cut tangentially on silver stain and segmental fibrinoid necrosis (A). By immunofluorescence microscopy, there is "full house" glomerular and extraglomerular staining, including global granular capillary wall and mesangial as well as granular tubular basement membrane staining for IgG (B) and global granular mesangial and granular tubular basement membrane staining for C1q (C).

## Learning Points

The most common etiology of acute pancreatitis is gallstone disease [1]. However, in the absence of common alternative explanations, less common pathologies should be considered based on the patient's history and exam. The presentation with malar rash should place acute lupus flare within the differential diagnosis of acute pancreatitis.

There are reports of vaccine-preventable illness, such as mumps being a primary etiology for acute pancreatitis [2]. However, this did not explain the patient's elevated inflammatory markers, urine protein/cr, and hematuria.

Infections are a very common trigger for SLE flares [3].

GI symptoms are very common among SLE patients. However, acute pancreatitis is a fairly rare specific manifestation occurring in 2-8% of patients with SLE [4].

Renal involvement can be observed in up to 50% of patients with SLE with variable presentations ranging from asymptomatic hematuria/proteinuria to nephrotic syndrome and rapidly progressive glomerulonephritis (RPGN) [4].



[1] J. D. Quinlan, "Acute pancreatitis," *Am. Fam. Physician*, vol. 90, no. 9, pp. 632-639, Nov. 2014.

[2] C. L. Witte, "Pancreatitis Due to Mumps," *JAMA J. Am. Med. Assoc.*, vol. 203, no. 12, p. 1058, Mar. 1968, doi: 10.1001/jama.1968.03140120066019.

[3] Pan, Q., Liu, Z., Liao, S., Ye, L., Liu, X., Chen, X., ... & Liu, H. (2019). Current mechanistic insights into the role of infection in systemic lupus erythematosus. *Bio-medicine & Pharmacotherapy*, 117, 109122.

[4] Hoffman, B. L., & Katz, W. A. (1980, May). The gastrointestinal manifestations of systemic lupus erythematosus: a review of the literature. In *Seminars in arthritis and rheumatism* (Vol. 9, No. 4, pp. 237-247). WB Saunders.