**Learning Objectives**

- Recognize the clinical features and presentation of renal and especially gastrointestinal amyloidosis
- Recognize and understand imaging and biopsy findings of amyloidosis

**Case Presentation**

<table>
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<tr>
<th>Demographic data:</th>
<th>48-year-old homeless Hispanic male</th>
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<tr>
<td>PMH:</td>
<td>Diabetes mellitus, congestive heart failure, renal failure with nephrotic range proteinuria, polysubstance abuse, deep vein thrombosis</td>
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<tr>
<td>HPI:</td>
<td>ED for evaluation of chronic bilateral lower extremity wounds, diarrhea, and one-year unintentional weight loss of 83 lbs over one year</td>
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<td>Pertinent negatives:</td>
<td>No fevers, hematochezia, hematemesis, melena</td>
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<td>Objective:</td>
<td>T 37.2°C, HR 77, RR 12, BP 137/77, SpO₂ 99%</td>
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<td>Physical Exam showed bilateral lower extremity with significant skin breakdown, weeping wounds. Mild amount of purulent drainage/discharge.</td>
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<td>Pertinent labs:</td>
<td>WBC 11 thousand/ul, Hgb 5.5 g/dL, MCV 89.4 mL, BUN 26 mg/dL, Cr 2.89 mg/dL, eGFR 23 mL/min/1.73 m², Albumin 1.8 g/dL, Ca 7.1 mg/dL, UDS positive for methamphetamine, opiates, fentanyl</td>
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<td>Initial Imaging:</td>
<td>CT Abdomen+Pelvis WO Contrast showed moderate volume ascites, diffuse anasarca and bilateral pleural effusions with consolidations in the right middle lung lobe</td>
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<td>US Leg Venous Doppler Bilateral showed extensive bilateral deep venous thrombosis involving the common femoral to posterior tibial veins.</td>
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**Procedures:**

- EGD showed amorphous eosinophilic material with apple-green birefringence on Congo red stain consistent with amyloidosis in the gastric antrum, gastric body, and duodenum.
- Renal biopsy showed showed expanded glomerulus with amorphous eosinophilic material which was Congo red positive, weakly PAS positive, and Jones negative.
- The amorphous material was also found to involve arterioles, artery, and focal areas of interstitium staining for IgA, kappa, and lambda light chains.

**Hospital Course:**

- Patient left against medical advice prior to treatment initiation. Patient was unfortunately lost to follow-up.

**Case Presentation (cont)**

**Imaging**

- **Figure 1.** Image A + B: Duodenal biopsy results  
  Image C + D: Gastric antrum biopsy results
- **Figure 2.** Image A: Renal biopsy with Congo Red staining  
  Image B: Renal biopsy with H&E staining

**Discussion**

- Amyloidoses are a rare group of disorders caused by extracellular deposition of abnormally folded proteins in various organ systems leading to progressive organ damage.¹,²
- Green birefringence under cross-polarized light after staining with Congo red is the gold standard for confirming deposited amyloid on tissue biopsy.³
- While involvement of the kidneys is rather common, gastrointestinal involvement can be as low as 3.2%.⁴
- Clinically, gastrointestinal amyloidosis can present as non-specific symptoms including weight loss, gastric outflow obstruction, hematochezia/hematemesis, anemia, obstipation, perforation, epigastric pain, nausea, vomiting, and diarrhea.²
- In the GI tract, vasculature, nerves, and nerve plexuses are damaged by amyloid deposition within the muscularis mucosa leading to blood vessel frailty, decreased gut wall compliance, and decreased peristalsis.⁵

**References**