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GLOBAL EXPERTS, LOCAL LEARNING
New Insights in Cardiomyopathies
FIT Case Study

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Case Presentation

• 44 years old male, presented with progressively worsening dyspnea and easy fatigability for the last six months and 2 episodes of syncope.
Case Presentation

• Physical Exam:
  • BP 90/50 mmHg, HR 110 bpm, RR 22 bpm, BMI 24.8 kg/m²
  • On examination, the patient was in congestive cardiac failure with raised jugular venous pressure and prominent left ventricular S4.
  • Hepatomegaly and macroglossia.
Case Presentation

- **Laboratory exams:** Hemoglobin 11.0 g/dl, blood urea of 55 mg/dl, Creatinine 1.8 mg/dl, Sodium 139 mmol/l, Potassium 3.9 mmol/L Troponin I 0.1 ng/mL, NT-Pro BNP >25000 pg/mL.
Electrocardiogram
Transthoracic Echocardiogram
Transthoracic Echocardiogram
Cardiac Magnetic Resonance
Serum and Urine Protein Electrophoresis

[Diagram showing electrophoresis results with peaks labeled as Albumin, Alpha 1, Alpha 2, Beta 1, and Gamma.]

<table>
<thead>
<tr>
<th>Fraction</th>
<th>%</th>
<th>% Normal</th>
<th>(mg/dl)</th>
<th>(mg/dl) Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albumin</td>
<td>5.9</td>
<td>52.0-65.1</td>
<td>2.9</td>
<td>31.2-52.1</td>
</tr>
<tr>
<td>Alpha 1</td>
<td>2.7</td>
<td>1.0-3.0</td>
<td>1.2</td>
<td>0.6-2.4</td>
</tr>
<tr>
<td>Alpha 2</td>
<td>1.8</td>
<td>9.6-14.4</td>
<td>0.8</td>
<td>5.7-11.5</td>
</tr>
<tr>
<td>Beta 1</td>
<td>4.0</td>
<td>6.0-8.8</td>
<td>1.8</td>
<td>3.6-7.8</td>
</tr>
<tr>
<td>Gamma</td>
<td>85.6</td>
<td>10.7-20.3</td>
<td>39.3</td>
<td>6.4-16.2</td>
</tr>
</tbody>
</table>

Tot. Prot. (mg/dl) 45.9↑ 6.0-8.0
Endomyocardial biopsy
Clinical Evolution.

- The working diagnosis was hence a case of congestive cardiac failure with underlying restrictive cardiomyopathy.
- Cardiac Light-Chain Amyloidosis was diagnosed.
- Treatment for heart failure was initiated (diuretics).
Clinical Evolution.

- During hospitalization, the patient presented ventricular tachycardia which degenerated into ventricular fibrillation; despite advanced life support, the patient died.