

Approaches and management of extensive carcinoid heart disease with multiple significant valvular diseases

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INTRODUCTION:

- Neuroendocrine tumors (NETs) are a distinct group of malignant tumors that can manifest with various systemic symptoms.
- Cardiac symptoms are commonly observed as part of systemic presentation, typically involving the right side of the heart.
- These symptoms arise due to the excessive release of bioactive peptides by tumor cells, of which serotonin is the primary agent.
- There is no single definitive diagnosis test. A combination of strong clinical suspicion, serologic markers, and imaging findings often leads to a diagnosis.

CASE PRESENTATION:

- A 61-year-old woman presented with acute dyspnea, anasarca.
- Medical history: hypertension, hyperlipidemia, colonic well-differentiated NET with hepatic metastasis
- Lab tests: 24-hour urine 5-HIAA was 231.9 μmol , moderate pan-cytopenia, AKI (GFR = 35 ml/min), mild elevation of liver enzyme.
- Cardiac echo findings: Moderate aortic regurgitation, severe tricuspid regurgitation, normal EF (55%), grade 2 diastolic dysfunction, marked left atrial dilation, moderate mitral regurgitation, severe pulmonary valve regurgitation
- EKG: Sinus bradycardia, low QRS voltage
- Treatment: steroids, diuresis, and octreotide.

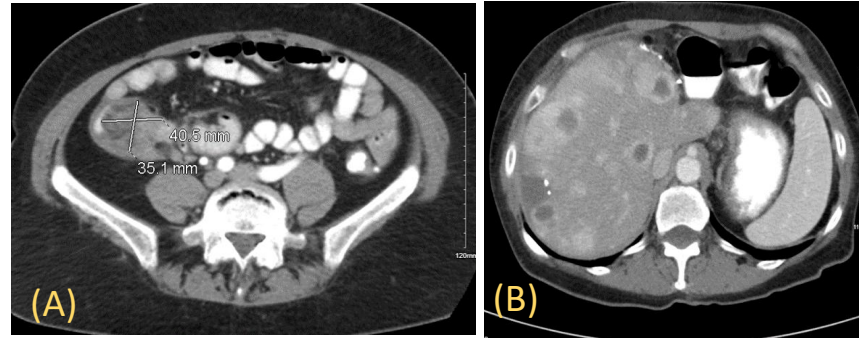


Figure 1: Contrast abdomen showed a right colonic mass (A) with subsequent PET/CT scan showed extensive hepatic metastases (B).

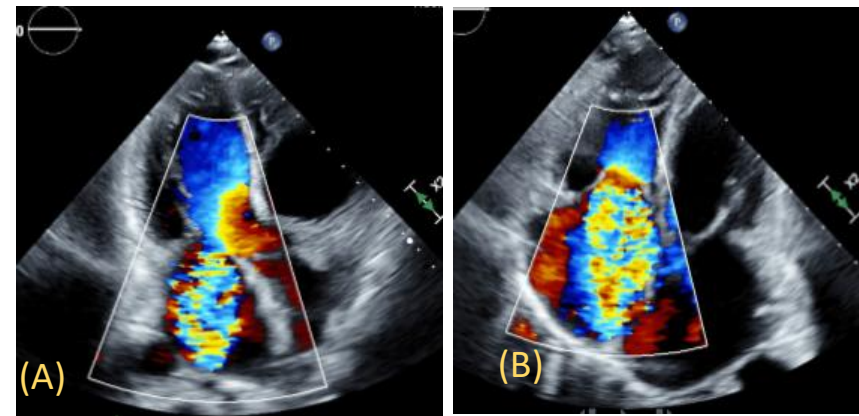


Figure 2: TEE showed mod-severe mitral regurgitation (A) and mod-severe aortic valve regurgitation (B).

LITERATURE REVIEW:

- Carcinoid syndrome: Multiple manifestations, including flushing, diarrhea, and valvular heart disease.
- Carcinoid crisis: fluctuating vital signs, profound bronchospasm, and multiple organ dysfunction.
- Prevalence of reported carcinoid syndrome: Ranges from 6% to 13% for GI NET and <1% for bronchopulmonary NETs.
- Population-based studies: 21% of patients have metastatic spread at the time of diagnosis; retrospective chart reviews report even higher proportions (ranging from 56% to 69%).

UNIQUE ASPECT :

- A unique clinical presentation of a well-differentiated metastatic NET in a 61-year-old woman with significant multi-system involvement.

RECOMMENDATION :

- Early recognition and proactive management are crucial for optimizing outcomes in individuals with NETs and associated cardiac complications.

CONCLUSION :

- A comprehensive evaluation with imaging, echocardiography, and lab tests is crucial for disease extent and management.