

## TRICUSPID STENOSIS

### ETIOLOGY

- Rheumatic (most common).
- Congenital (rare).
- Carcinoid.
- Prosthetic valve dysfunction.

#### **HINT**

Carcinoid vs Rheumatic?

*Carcinoid = fixed body of the leaflets. Rheumatic = tethered leaflet tips.*

### PATHOPHYSIOLOGY

- Increased RA pressure causes RA dilatation.
- Rheumatic TS almost always associated with MS.
- Carcinoid heart disease results from increased serotonin production from a carcinoid tumor (intestinal tract or pancreas). Serotonin deposits may form on the right heart endocardium causing TS/TR/PS/PR.
- Increased risk for endocarditis.

### PHYSICAL SIGNS

- Signs and symptoms may be masked by MS.
- Diastolic murmur (varies with respiration) and an opening snap.
- Symptoms of right heart failure (ascites, peripheral edema).

### ECHO

- M-mode shows decreased E-F slope, multiple echoes and reduced amplitude of the "E" wave.
- Thickened tricuspid leaflets with decreased mobility.
- Right atrial and IVC enlargement.
- Tethered TV leaflet tips (doming).
- In carcinoid disease the TV leaflets are thickened and may appear fixed.

### DOPPLER

- Increased velocity and turbulence across the tricuspid valve.
- Tricuspid regurgitation may be present.
- Measure mean transvalvular gradient.