

Tricuspid Atresia



PLAY PICMONIC

Pathophysiology

Absent Tricuspid Valve

Absent Tricycle-cupid

Tricuspid atresia is a congenital heart defect involving an underdeveloped or absent tricuspid valve. This results in the exchange of no blood between the right atrium and the right ventricle.

Incompatible with Life Without a Shunt

Lifeguard can't save a Life without Shunting blood

Tricuspid atresia is dependent on establishing interatrial and interventricular communication. Therefore, extracardiac connections such as a PDA, ASD, or VSD need to be present.

Symptoms

Cyanosis at Birth

Cyan-crayon with Newborn

Tricuspid atresia involves no blood exchange between the right atrium and the right ventricle. The deficient oxygen supply to the tissues results in cyanosis within days after birth. The severity of the cyanosis is based on the presence of a shunt (e.g., ASD, VSD) and the degree of intracardiac mixing.

Single S2 Sound

Single Stethoscope-girl in a (2) Tutu

A single-second heart sound is often associated with tricuspid atresia.

Diagnosis

Electrocardiogram (ECG)

ECG

Tricuspid atresia can reveal certain findings on ECG, such as tall P waves due to right atrial dilation, LVH with left axis deviation, and minimal R waves in precordial leads.

Echocardiogram

Echoing Cardiogram

Tricuspid atresia is confirmed via an echocardiogram. This test can reveal an absent or underdeveloped tricuspid valve, right ventricular hypoplasia, or ASD.

Treatment



Prostaglandin

P-rasta

Tricuspid atresia can initially be treated by maintaining the PDA via a PGE1 infusion, thereby allowing for continued ductal-dependent blood flow.

Avoid NSAIDs

Avoid-sign N-sad

NSAIDs, such as indomethacin, aid in closing the PDA and, therefore, should be avoided in order to maintain PDA ductal-dependent blood flow.

Surgical Correction

Surgeon with Scalpel

Tricuspid atresia usually involves a three-stage surgical repair, which focuses on both the pulmonary and systemic circulations.