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.