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ORAL PRESENTATION

How to approach cyanotic heart disease in newborn

Huda Ibraheem Khaleel
King Saud Medical City, King Saudi Arabia

Management of cyanotic heart disease: Cyanosis is a common clinical finding in newborn infants. Neonatal cyanosis, particularly central cyanosis, can be associated with significant and potentially life-threatening diseases, including pulmonary, cardiac, metabolic, neurologic, infectious, and hematologic disorders. This can occur at a normal systemic oxygen saturation and is commonly seen in healthy newborns for the first 1-2 days of life.

Critical congenital heart disease (CCHD): CCHD has been defined as structural heart defects that are usually associated with hypoxia in the newborn period and have potential for significant morbidity and mortality early in life. Other types of cyanosis this is also referred to as acrocyanosis and is a generally a benign finding. Peripheral cyanosis is thought to represent venous congestion caused by immature control of vascular tone in neonates and this improves as the neonate matures.

CCHD has been estimated to be present in ~ 3 in 1000 live births, including Saudi. Pulse Oximetry Screening (POS) is a highly specific and moderately sensitive test for detecting CCHD with very low false-positive rates. Critical congenital heart disease Pathophysiology to help better understand the differential of central cyanosis, Differential Diagnosis First, we will divide our differential diagnosis based on central and peripheral causes of cyanosis.

Central Cyanosis Differential Peripheral Cyanosis Differential Peripheral cyanosis can be normal for the first 24 hours of a baby's life if they appear to be otherwise healthy Peripheral Cyanosis Differential Peripheral cyanosis can be normal for the first 24 hours of a baby's life if they appear to be otherwise healthy.

Investigations & Management of cyanosis and treatment: Neonates and infants with central cyanosis or cardiac failure are an emergency – irrespective of their clinical state.

Summary: A normal neonatal examination does not guarantee that the baby is normal and certainly does not exclude life threatening cardiovascular malformation. A persistent murmur or any other sign of congenital heart disease should warrant prompt pediatrics cardiac evaluation. Desaturation or cyanosis that does not improve with oxygen or ventilation significant persistent difference in upper and lower limb saturations.

Biography

Huda Ibrahim Ali Khaleel is a distinguished consultant in pediatrics and pediatric congenital cardiology at King Saud Medical City (KSMC), Riyadh. With over 15 years of experience, she leads the pediatric cardiology department, handling diverse cases and conducting fetal echocardiography. Dr. Huda earned her MBBS from King Saud University in 1989 and completed a pediatric cardiology fellowship in 2005 at Prince Sultan Cardiac Center. She also holds a 2016 diploma in pediatric pulmonary hypertension from Madrid. Actively involved in teaching, research, and publications, Dr. Huda is committed to advancing pediatric cardiology.

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