

The Adult! Blue Baby

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Abstract

Central cyanosis is common clinical presentation in neonates and infants which is highly associated with congenital heart diseases (CHD) but this presentation is very unusual in adults presenting only with fever. However, thinking of central cyanosis in adults can lead us to variety of causes ranging from pulmonary embolism to valvular heart defects as well as arteriovenous malformation and poisoning. Through clinical evaluation and point of care echocardiography gives the insight of unusual diagnosis.

Keywords: Fever; Cyanosis; Pan systolic murmur; Congenital Heart Disease; Tetralogy of fallot (ToF); Echocardiogram.

CASE DESCRIPTION

A 27 years old cachexia female with no significant comorbidities, presented with complaints of fever and generalized weakness. Her vitals showed Temp 100.2°F; HR 152/min; RR 30/min; SpO₂ 60% Room Air; BP 150/100mmHg; RBS 136mg/dL; GCS E4V5M6. General examination showed dehydration, clubbing, peripheral and central cyanosis, cold peripheries and CRT >3 seconds. Cardiovascular examination suggested pansystolic murmur and the rest of the examination

findings were unremarkable. Electro cardiography showed sinus tachycardia with P. Pulmonale. Echocardiography suggested membranous ventricular septal defect (VSD) with right to left shunt, right atrial and ventricular dilatation, severe pulmonary valve stenosis and overriding aorta with pulmonary artery atresia with preserved heart function. Blood tests showed Haemoglobin 21 g/dl, Arterial Blood Gas pO₂ 36.9 mmHg and rest were unremarkable. Patient was diagnosed with Tetralogy of Fallot (ToF). Patient had history of tooth extraction 1 month back followed by fever. In view of persistent fever, blood cultures were sent 72 hours apart which were both positive for streptococcus oralis and mitis suggestive of Infective Endocarditis (IE). Patient was medically managed and planned for surgical repair.

DISCUSSION

Diagnosis of ToF is very rare in adults where survival rate is around 25% in age above 10 years and only around 3% in age above 40 years. IE is one of the precipitating factors for ToF. The risk of

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IE in cyanotic CHD is six times more compared to acyanotic CHD. Incidence of IE in corrected ToF is 18% whereas in undiagnosed ToF is only around 4%. 86% adults have 36 years survival rate who underwent surgical repair for ToF. Adulthood surgical management has higher risk of developing arrhythmias, heart failure, and sudden cardiac arrest compared to the corrected cases in childhood.

CONCLUSION

Through physical examination and early echocardiography in neonates and infants presenting with cyanotic spells will significantly decrease the risk of ToF remaining undiagnosed till adulthood. Factors leading to delayed presentation of ToF can be attributed to mild symptoms and lack of patient and family awareness. People with repaired ToF have some restrictions on certain strenuous activities, such as competitive sports. Survivors of ToF repair, face not only the complex medical issues but also social and psychological challenges which impacts on their quality of life.

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