

PTB, especially in those with acyanotic and cyanotic high-flow lesions and pulmonary stenosis.

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Cavitary tuberculosis in complex cyanotic heart disease

Pulmonary tuberculosis (PTB) is rarely reported in cyanotic congenital heart disease (CHD). A 5-year-old boy presented with fever and cough for one month with two to three episodes of haemoptysis. There was no history of weight loss, loss of appetite or contact with a person suffering from TB. On examination he was 15.5 kg and height was 115 cm. He had clubbing and decreased air entry on the right side of the chest with increased vocal resonance in the right supramammary region. He had a single second heart sound. There was no murmur and the cardiac apex was in the right 5th intercostal space. The other systems were normal. Chest X-ray showed loss of lung volume in the right lower zone with extensive pleural thickening, a cavity in the right upper zone and dextrocardia. CT scan of the chest showed multiple nodular air space opacities in the right lung parenchyma with consolidation and cavitation in the right upper and middle lobes with enlarged conglomerate lymph nodes in the right paratracheal, subcarinal and right hilar region with dextrocardia and situs inversus. Echocardiography showed a single atrium, ventricle with a single atrioventricular valve and mirror image dextrocardia. His sputum smear for acid-fast bacilli (AFB) was positive. The Mantoux test was negative and the HIV ELISA was negative. The child was started on four-drug antituberculous therapy (ATT) consisting of isoniazid (H), rifampicin (R), ethambutol (E), and pyrazinamide (Z) for two months followed by HR for the next four months to which he responded.

Patients with acyanotic-CHD are susceptible to develop PTB.¹ The incidence of PTB among patients with congenital cyanotic heart disease is about 2%.² *Mycobacterium tuberculosis* (MTB) being an obligate aerobe, the oxygen-rich sites in acyanotic-CHD provide a suitable environment to growth. However, in a study of 69 children treated for TB, the two most common comorbid conditions in children with TB were malignancy (23%) and cyanotic heart disease (18%),³ the reason being cyanotic CHD had greater risks of acquiring PTB due to its inherent need for carbon dioxide (CO₂) for its growth. Also a definite stimulatory effect of CO₂ has been proven for MTB infection.⁴

Thus, physicians treating children with congenital heart lesions should maintain a high index of suspicion for the development of