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Original Research Paper

Surgery

A RARE CASE OF FUNGAL ENDOCARDITIS IN PRE-TERM INFANT

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ABSTRACT

Fungal endocarditis is an uncommon manifestation of systemic fungal infections. We report a 3 months old (90 Days) male child who developed a right atrial mass due to fungal infection. In neonates, endocarditis commonly involves the right sided heart valves. Fungal endocarditis carries a high mortality and surgery is the management of choice. The case has been presented for its rarity and only 5 per 1, 00,000 cases reported in one year

KEYWORDS :

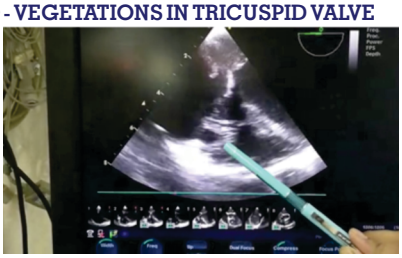
INTRODUCTION :

Fungal endocarditis is serious form of endocarditis, with mortality rate of above 50%. It is mostly caused by Candida and aspergillus species. In neonates, endocarditis commonly involves the right sided heart valves. Prematurity, prolonged endotracheal intubation, arterial and central venous catheters, use of broad spectrum antibiotics and steroids, necrotizing enterocolitis and gastrointestinal surgery have been associated with development of invasive fungal infections in these infants. Fungal endocarditis is an uncommon manifestation of systemic fungal infections and is usually related to the presence of indwelling catheters in the right atrium. We report a 3 months old (90 Days) male child who developed a right atrial mass due to fungal infection. The case has been presented for its rarity and only 5 per 1, 00,000 cases reported in one year

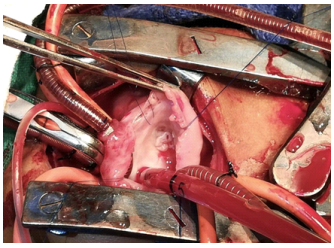
CASE STUDY :

A 5 kg, 90 days old male preterm infant was brought with complaints of respiratory distress, since birth. On auscultation there was a systolic murmur and normally palpable pulse.The heart rate was 108 beats per min and blood pressure 88 mm Hg. The chest X-ray showed a normal thymic shadow, no cardiomegaly and normal pulmonary vessels. There were no features of congestive heart failure.The haemoglobin was 5 gm/dl, TC- 14000 cells/cu mm, ESR – 18 mm fall in 1st hr. ECHO was done, which revealed the presence of hyper-echoic vegetation attached to tricuspid valve measuring about 1.4x1.1 cm, mild to moderate Tricuspid Regurgitation and PDA with good left ventricular function.Blood culture was done which revealed the presence of candida species and treated with Intra Venous antifungal agents such as Amphotericin 1mg/kg. Patient was taken up for surgery, PDA was ligated . Right atrium was opened, which revealed the presence of vegetations measuring about 1.5x1.2 cm in the anterior and septal leaflet of tricuspid valve. The vegetations are excised in toto and rent in the leaflet was repaired. Patient was extubated and post operative period is uneventful.

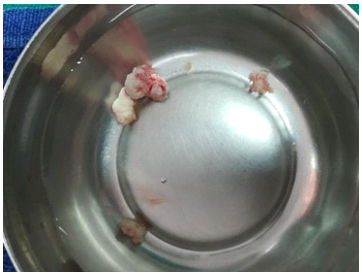
ECHO - VEGETATIONS IN TRICUSPID VALVE



FUNGAL MASS IN TRICUSPID VALVE



EXCISED FUNGAL MASS



CASE DISCUSSION :

Fungal endocarditis in neonates, usually due to Candida species is being increasingly recognised. Candida is ubiquitous in the environment of the neonate and systemic candidiasis usually results in presence of predisposing factors, immune deficiency states, abnormalities of leucocyte function and magnesium deficiency.

The right atrial mass in neonates could be an uninfected thrombus, a tumor or vegetation. A normal echocardiogram few days prior made tumor unlikely, and in the absence of an indwelling catheter large spontaneous thrombus was also unlikely. Candida endocarditis was suspected due to a large mass and few constitutional features. Unexplained episodes of apnea, bradycardia and hypotension could result from unanticipated right atrial mass in neonates. Therefore echocardiogram should be done in neonates with such symptoms and indwelling catheters, and also in neonates with persistent candidemia.

Fungal endocarditis carries a high mortality and surgery is the management of choice. More recently cure of fungal endocarditis with a long course of anti-fungal drugs has been reported. Amphotericin B in the dose of 1 mg/kg/day for 40 to 70 days is well tolerated. The addition of flucytocine to the treatment is also reported. Cardiac surgery was considered in

our patient because of a large mass and associated cardiac lesion. However, the decision must be individualized. Increased awareness of the entity is warranted so that an early diagnosis is made and optimal treatment instituted.

CONCLUSION:

Fungal endocarditis, though rare has high fatality rate. Early diagnosis and prompt surgical intervention are key for successful outcomes.

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