LETTER-TO-THE-EDITOR

A Child with Pyopericardium

Sir:

Pyopericardium is caused by infection of the pericardium with pyogenic organisms, resulting in accumulation of pus in the pericardial cavity leading to severe respiratory distress and heart failure due to cardiac tamponade. This condition is uncommon in our clinical practice. Review of literature indicates that this condition is also very rare in Bangladesh. However, considering the high mortality associated with the disease, it is important to consider a case report, which may provide better understanding and help manage the condition.

An 8-year old boy was admitted to the Department of Paediatrics of Dhaka Medical College Hospital on 7 March 2000 with tender, painful swelling and limitation of movements of both ankle joints, fever, and multiple abscess all over the body for 14 days prior to admission. Clinical examination showed a toxic child, body temperature 103°F, radial pulse 100/minute, blood pressure 100/60 mm of Hg. Apart from involvement of the ankle joints, no other systemic abnormalities were noted. The patient was diagnosed as a case of pyogenic skin infection all over the body with suspected septicaemia and septic arthritis. He was treated with cloxacillin and ampicillin given parenterally, and the abscesses were drained next day. There was no remarkable improvement with the treatment, but five days later, the boy developed severe respiratory distress. Physical examination revealed the apex beat to be non-palpable and the heart sounds to be muffled. A provisional diagnosis of pericardial effusion was made at this stage. Chest x-ray and echocardiography revealed massive pericardial effusion with features of tamponade.

Pericardiocentesis was done under local anaesthesia by sub-xiphoid approach, and 250 mL of foul-smelling and creamy pus was aspirated. He improved subsequently, and post-aspiration echo done later the same day revealed only minimal effusion. Culture of pus showed the growth of Staphylococcus aureus sensitive to cloxacillin and gentamicin.

One week later his chest x-ray again showed cardiomegaly indicating rapid re-accumulation of pus. The patient was referred to the Cardiothoracic Surgery Unit of National Institute of Cardiovascular Disease, Dhaka. An open surgical drainage of the pericardial cavity was performed there, and flucloxacillin was given intravenously. His condition improved gradually within seven days, and the drainage tube was removed. He was discharged from the hospital after eight days. He was followed up for one year, initially monthly for three months and then two-monthly for another eight months. During the follow-up period, he was found well.

Pyopericardium is a condition of the pericardium where pus is accumulated within the pericardial cavity. If untreated, this may be a fatal condition leading to cardiac tamponade (1,2). It often begins with bacterial infections, such as pneumonia, epiglottitis, meningitis, or osteomyelitis (2). Signs and symptoms of the primary infection are noted initially, but later there is development of the signs of pyopericardium. Common organisms implicated are S. aureus and Haemophilus influenzae (1,2). Management of the disease includes pericardiocentesis as the early life-saving intervention along with antibiotics, although the open drainage is often needed. The patient presented similarly with the clinical features of septicaemia, septic arthritis, and multiple abscesses all over the body. Despite the use of cloxacillin and ampicillin, the patient’s condition deteriorated within five days, leading to acute cardiac tamponade. Accurate clinical diagnosis was confirmed by a pre-aspiration echocardiography and chest x-ray. Closed pericardial aspiration was done immediately to relieve the tamponade, and this also provided a sample of the exudate for diagnostic purposes. Post-aspiration echo confirmed the successful evacuation of pus. However, there was rapid accumulation of pus in the pericardial cavity, noted in the chest x-ray and echo. The recurrence rate of pericardial tamponade following aspiration is quite high and necessitates the open drainage as the choice of treatment (3,4). Therefore, the patient was referred to a cardiothoracic surgeon for open drainage.

Timely intervention with a team-approach comprising paediatricians, cardiologists, and
cardiothoracic surgeons for pericardiocentesis and open drainage, along with proper antibiotic coverage, remain the mainstay of successful management of the patient.

REFERENCES

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