



## Images in Cardiology

## Fatal complication of ductal arteritis in a malnourished child

Amit Malviya<sup>a,\*</sup>, Jyoti Prasad Kalita<sup>b</sup>, Pravin Kumar Jha<sup>a</sup>, Animesh Mishra<sup>a</sup><sup>a</sup> Department of Cardiology, North Eastern Indira Gandhi Regional Institute of Health & Medical Science, Shillong, India<sup>b</sup> Department of CTVS, North Eastern Indira Gandhi Regional Institute of Health & Medical Science, Shillong, India

## ARTICLE INFO

## Article history:

Received 22 January 2016

Accepted 1 April 2016

Available online 3 May 2016

## Keywords:

Aneurysm

Infected pulmonary artery

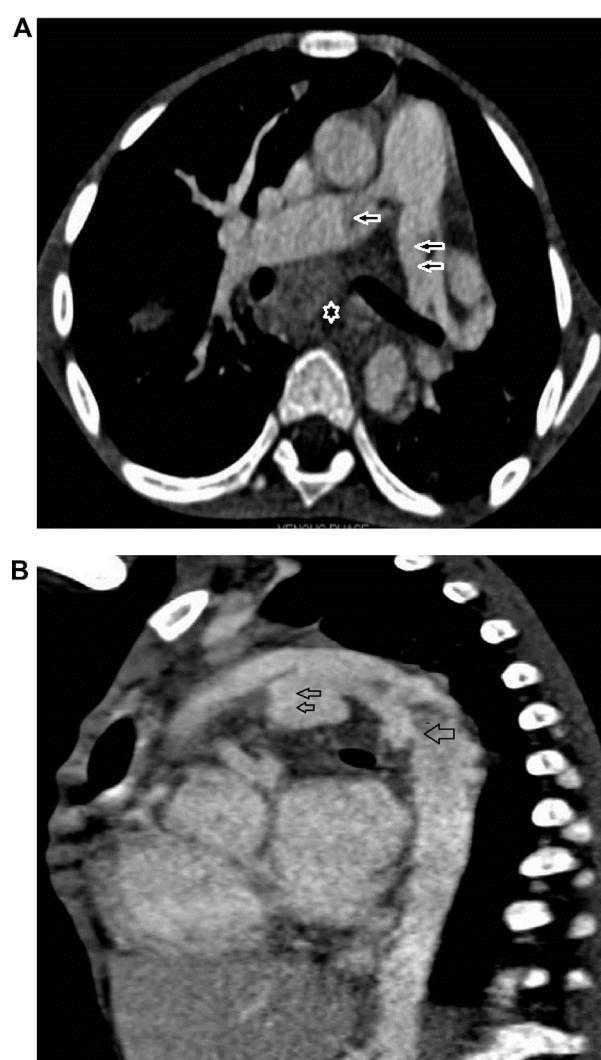
Endocarditis

Multidetector computed tomography

Proper counseling and timely intervention in cases of congenital heart lesions is absolutely essential and vital because rare and potentially fatal complications can arise out of simple lesions like patent ductus arteriosus (PDA).

The incidence of infective arteritis in untreated PDA is less than 1%.<sup>1</sup> Pulmonary showering from infected PDA vegetation is not uncommon. Vegetations usually occur on the pulmonary artery end of duct where the high velocity jet strikes and embolic events are usually to the lungs rather than the systemic circulation. The mycotic aneurysm of branch pulmonary circulation is rare but is a recognized entity. Aneurysms occur within the pulmonary circulation in conjunction with infective endocarditis or in association with pneumonia.<sup>2</sup> The pulmonary findings of infective endocarditis in pulmonary computed tomography have a wide range of vascular abnormalities, such as intravascular filling defects, total vascular cut off, vascular enhancement, or enlargement of an occluded vessel. Localized mycotic aneurysm of affected pulmonary artery along with perivascular ground-glass opacities are important ancillary findings.<sup>3,4</sup>

A severely malnourished 7-year-old female child was referred from local healthcare facility for evaluation of high fever. The parents were aware of a hole in the heart. Echocardiography showed a large aneurysmal patent ductus arteriosus with left to right shunt, and a very large vegetation sitting on pulmonary end



**Fig. 1.** (A) Computed tomography image showing massive vegetation (filling defects) at mid LPA (double arrow) and RPA (single arrow) with distal LPA aneurysm. There is presence of mediastinal inflammatory tissues (star). (B) Computed tomography image showing massive vegetation (filling defects) at upper and mid descending aorta with aneurysmal dilatation (single arrow). Patent ductus arteriosus is aneurysmal and loaded with thrombus (double arrow).

\* Corresponding author at: Department of Cardiology, North Eastern Indira Gandhi Regional Institute of Health & Medical Science (NEIGRHIMS), Shillong 18, Mawdiandiang, Meghalaya, India. Tel.: +91 8794705698.

E-mail address: [dramit\\_malviya@rediffmail.com](mailto:dramit_malviya@rediffmail.com) (A. Malviya).

of the duct, scattered small vegetations on both branch pulmonary arteries and right atrial surface of interatrial septum (Online Suppl. Fig. 1).

Supplementary material related to this article can be found, in the online version, at [doi:10.1016/j.ihj.2016.04.003](https://doi.org/10.1016/j.ihj.2016.04.003).

A multidetector pulmonary computed tomography revealed large hypodense intraluminal filling defects, suggesting either a thrombus or vegetation at right pulmonary artery, left pulmonary artery, patent ductus arteriosus, upper and mid descending thoracic aorta (Fig. 1). An ill defined mass in the pretracheal and subcarinal region showing enhancement in venous phase was seen, a sign of inflammatory tissue. The ductus arteriosus was loaded with thrombus (Fig. 1B). A saccular aneurysm (mycotic) was noted arising from the medial aspect of the aortic isthmus measuring 1.4 cm × 1.7 cm. Irregular thrombus in aortic lumen and wall thickening was noted in the proximal third of the descending aorta (Fig. 1B). Multiple saccular aneurysms (mycotic) were noted in the branches of pulmonary arteries (Online Suppl. Fig. 2). The patient was treated with empirical antibiotics along

with supportive management. Unfortunately, the patient succumbed to the overwhelming infection (sepsis) augmented by poor nutritional status and undiagnosed arteritis for a long time.

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### Conflicts of interest

The authors have none to declare.

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