A 10-year-old boy presented with a 12-week history of progressive breathlessness following a chest infection. He had no history of pyrexia or night sweats and no significant weight loss. On examination, the patient was well at rest but breathless on minimal exertion. He was slightly pale with palpable cervical lymph nodes. His heart rate was 136 b.p.m. and blood pressure 107/75. On auscultation, heart sounds were muffled with no audible murmurs, and his chest was clear. Blood tests were normal but a chest X-ray showed a massive cardiomegaly. His heart rate was 136 b.p.m. and blood pressure 107/75. On auscultation, heart sounds were muffled with no audible murmurs, and his chest was clear. Blood tests were normal but a chest X-ray showed a massive cardiomegaly. The electrocardiogram showed a large pericardial effusion which was compromising the function of the heart. A pericardial drain was inserted and the patient was unstable throughout the procedure with bradycardia requiring adrenaline boluses. Later the same day, he had a cardiac arrest and cardiopulmonary resuscitation (CPR) was commenced. A sternotomy was performed to see if there was any reversible cause of cardiac arrest. The findings were of an infiltrating cardiac tumour surrounding the left and right ventricle. There was no residual effusion. In view of these findings and the prolonged resuscitation, CPR was discontinued and the patient confirmed dead.

At post-mortem there was a widespread malignant tumour involving the external surface of both ventricles (Panel B) with extension into the roof of the left atrium (Panel C) and adjacent visceral and parietal pericardium. He also had widespread involvement of all mediastinal lymph nodes. Histology confirmed the diagnosis of a primary cardiac T-cell lymphoblastic lymphoma (Panel D).

Panel A. A chest X-ray (CXR) showing a massive cardiomegaly.

Panel B. Widespread malignant tumour involving the external surface of both ventricles.

Panel C. Widespread malignant tumour involving the external surface of both ventricles with extension into the roof of the left atrium.

Panel D. Histology showing infiltration of right and left ventricles by small malignant lymphoid cells. (Haematoxylin and eosin stain, magnification ×400). Inset: The cells stained positively for CD3.

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