“FUNGAL MASS MIMICKING AN ATRIAL MYXOMA IN AN IMMUNOCOMPROMISED PATIENT”

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Background

Intracardiac masses pose a diagnostic dilemma with a multitude of differentials. These include tumours, thrombus, vegetation or simply anatomical variants (e.g. Eustachian valve). The diagnosis can be achieved in most cases by history and non-invasive investigations. Echocardiography remains the benchmark with cardiac magnetic resonance imaging (MRI) being increasingly used to assist diagnosis. However, in certain cases diagnosis is only obtained with histopathology obtained through surgery or postmortem. We present an unusual case of a fungal mass mimicking an atrial myxoma in an immunocompromised patient diagnosed with history, laboratory investigations, echocardiography, cardiac MRI and response to antimicrobials.

Case Report

We report a case of a 31-year-old female with Stage 4 Burkitts Lymphoma diagnosed 6 months earlier. She presented after completion of 6 cycles of chemotherapy (Berlin-Frankfurt-Munster regime) with neutropaenia and persistent fever with associated Methicillin-sensitive Staphylococcus aureus bacteraemia, which was treated with a prolonged course of intravenous cloxacillin. Despite a course of intravenous cloxacillin and subsequent blood cultures with no further bacterial growth she continued to have fever.

A transthoracic echocardiogram (TTE) noted a right atrial mass measuring 38 x 13 mm. A CT scan was reported as disseminated infection in the brain, lungs and liver suggestive of a fungal infection. Further blood cultures were reported as growing a yeast species with polymerase chain reaction (PCR) testing revealing a Aureobasidium species of fungus. She was started on intravenous caspofugin, which was subsequently changed to amphotericin B.

Another TTE and a transoesophageal echocardiogram showed a gradually reduction in size of the right atrial mass (30 x 11 mm, 13 x 9 mm respectively). An MRI done confirmed the reduction in size (15 x 9 mm) with no MRI characteristics of a tumour or thrombus. Clinically she improved with reduced inflammatory markers and settled fever. A subsequent TTE done 1 month later showed a clean right atrium with no further evidence of an intra-atrial mass.

Cardiac MRI showing a right atrial mass with no myxoma or thrombus features.

TTE and TEE showing right atrial mass.

Conclusion

Intracardiac masses are diagnostic dilemmas with many causes. Various noninvasive investigations are used to help diagnose and guide treatment. Fungal infection causing an intracardiac mass is very rare. In our case, the diagnosis was achieved with the use of blood cultures, PCR, serial echocardiograms, MRI and response to antifungal therapy.