

When three is not a magic number – a case of native triple-valve endocarditis caused by *Streptococcus agalactiae*

Darren Borg, Mintoff Dillon, Fleri-Soler Jeremy, Cassar Daniel, Delicata Julian, Felice Tiziana, Caruana Maryanne

AIM

Multiple valve infective endocarditis (IE) is uncommon. It has mostly been reported in immunocompromised subjects or those with structural heart disease or intravenous drug use (IVDU).

Methodology

We report the case of a 47-year old woman with a background of type II diabetes mellitus, morbid obesity and poor dental hygiene that presented to hospital with septic shock and hyperosmolar hyperketotic state secondary to three-valve IE. She had no history of valvular or structural heart disease or IVDU. Transoesophageal echocardiography confirmed a large vegetation on the pulmonary valve resulting in severe pulmonary regurgitation, infective involvement of the tricuspid valve with a torn chorda resulting in a flail septal leaflet and severe tricuspid regurgitation as well as infection of the aortic valve resulting in cusp retraction and severe eccentric aortic regurgitation. Blood cultures grew *Streptococcus agalactiae*.

Results

The patient's condition deteriorated after multiple recurrent infective pulmonary emboli from the pulmonary valve vegetation and she subsequently underwent urgent mechanical aortic and tissue pulmonary and tricuspid valve replacements in a tertiary centre in the United Kingdom. This was followed by the implantation of a dual chamber pacemaker for post-operative complete heart block. After a stable period following her transfer back to Malta, the patient deteriorated rapidly as a consequence of sternotomy wound breakdown, disseminated intravascular coagulation and acute kidney injury and passed away in intensive care.

Discussion

An uncommon condition manifesting in a patient without most of the main risk factors, having no past history of IVDU, immunosuppression or structural heart disease. This case divulges the complications associated with the condition, and it's significant mortality rate.

Conclusion

Multiple valve IE can occur in the absence of recognised risk factors and is associated with a high mortality even following successful surgical infected valve replacement.