Fibrin glue on an aortic cusp detected by transesophageal echocardiography after valve-sparing aortic valve replacement: a case report.

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Abstract:

INTRODUCTION: Fibrin glue is used commonly during cardiac surgery but can behave as an intracardiac abnormal foreign body following surgery. There have been few such cases reported, and they were typically noticed only because of the resulting catastrophic cardiac conditions, such as valvular malfunction. We report a case where, for the first time, transesophageal echocardiography was used to detected fibrin glue that was adherent to the ventricular side of a patient's aortic valve immediately after aortic declamping.

CASE PRESENTATION: A 45-year-old Japanese man with Marfan syndrome underwent an aortic valve-sparing operation to treat moderate aortic valve regurgitation resulting from enlargement of his right coronary cusp. Fibrin glue was lightly applied to the suture line between the previous and new grafts. Transesophageal echocardiography performed prior to weaning from the cardiopulmonary bypass revealed mild aortic valve regurgitation in addition to a mobile membranous structure attached to the ventricular side of his aortic valve. It was identified as fibrin glue. We resolved the regurgitation by removing the fibrin glue and repeating the aortic cusp plication. The patient had no complications during recovery.

CONCLUSIONS: Fibrin glue can act as an intracardiac foreign body and lead to a potentially fatal embolism. We demonstrated the use of transesophageal echocardiography to detect a fibrin

glue-derived intracardiac abnormal foreign body and to confirm its removal. To the best of our knowledge, this is the first case where fibrin glue adherent to the aortic valve was detected by transesophageal echocardiography. These findings demonstrate the importance of using transesophageal echocardiography during cardiac surgery that involves using biological glues.