

C16. The Ross Full Root Replacement In Adults With Bicuspid Aortic Valve Disease

John W. Brown; Ali P. Shahriari; Mark Ruzmetov; Yousuf Mahomed; Mark W. Turrentine
Indiana University School of Medicine, Indianapolis, Indiana, United States

OBJECTIVES: Bicuspid aortic valve disease(BAVD) is the most common congenital cardiac lesion causing aortic stenosis in adults. This lesion can be associated with histological abnormality of the aortic wall and dilated or aneurismal ascending aorta(AAA). In younger patients the Ross operation offers several advantages over conventional AVR, however, the wisdom of performing this procedure on adults in the face of BAVD has been questioned.

METHODS: Between 1994-2009, 94 of 110 adult patients with BAVD underwent the Ross full root replacement at our institution. The endpoint of the study was freedom from autograft dilatation >4.0cm, dysfunction, repair or replacement.

RESULTS: The mean age of the patients was 37.4years (range,18-63years). Sixteen patients had AAA(4.0-5.2cm) associated with their BAVD that were resected at the time or subsequent to their RossAVR. The follow-up was 7.9+/-3.9years. At latest follow-up, sixteen patients(15%) had AAAs with a mean size 4.5cm (range,4.0-6.4cm). Eight patients(7%) required a redo operation on the autograft. Four of 8 of the patients undergoing reoperation had their autograft valve preserved, and others(n=4) underwent a modified Bentall root replacement. Only 2 of patients with preoperative ascending aorta dilatation have developed late autograft dilatation. Freedom from autograft dilatation >4.0cm, dysfunction, repair or replacement was 84% at 15years.

CONCLUSIONS: Our mid-term results indicate that the Ross AVR in adults with BAVD had good outcomes with very low incidence of autograft related complications. In half of the patients undergoing a reoperation(n=4), the autograft valve could be preserved. Preoperative diagnosis of BAVD and/or AAA is not predictive of late autograft dilatation of failure.