OPERATIONS,1. Mitral valve repair using a quadrangular resection of the P2 segment of the posterior leaflet.,2. Mitral valve posterior annuloplasty using a Cosgrove Galloway Medtronic fuser band.,3. Posterior leaflet abscess resection.,ANESTHESIA: ,General endotracheal anesthesia,TIMES: ,Aortic cross-clamp time was ** minutes. Cardiopulmonary bypass time total was ** minutes.,PROCEDURE IN DETAIL: , After obtaining informed consent from the patient, including a thorough explanation of the risks and benefits of the aforementioned procedure, the patient was taken to the operating room and general endotracheal anesthesia was administered. Next, the patient's chest and legs were prepped and draped in standard surgical fashion. A #10-blade scalpel was used to make a midline median sternotomy incision. Dissection was carried down to the level of the sternum using Bovie electrocautery. The sternum was opened with a sternal saw, and full-dose heparinization was given. Next, the chest retractor was positioned. The pericardium was opened with Bovie electrocautery and pericardial stay sutures were positioned. We then prepared to place the patient on cardiopulmonary bypass. A 2-0 Ethibond double pursestring was placed in the ascending aorta. Through this was passed our aortic cannula and connected to the arterial side of the cardiopulmonary bypass machine. Next, double cannulation with venous cannulas was instituted. A 3-0 Prolene pursestring was placed in the right atrial appendage. Through this was passed our SEC cannula. This was connected to the venous portion of

the cardiopulmonary bypass machine in a Y-shaped circuit. Next, a 3-0 Prolene pursestring was placed in the lower border of the right atrium. Through this was passed our inferior vena cava cannula. This was likewise connected to the Y connection of our venous cannula portion. We then used a 4-0 U-stitch in the right atrium for our retrograde cardioplegia catheter, which was inserted. Cardiopulmonary bypass was instituted. Metzenbaum scissors were used to dissect out the SVC and IVC, which were subsequently encircled with umbilical tape. Sondergaard's groove was taken down. Next, an antegrade cardioplegia needle and associated sump were placed in the ascending aorta. This was connected appropriately as was the retrograde cardioplegia catheter. Next, the aorta was cross-clamped, and antegrade and retrograde cardioplegia was infused so as to arrest the heart in diastole. Next a #15-blade scalpel was used to open the left atrium. The left atrium was decompressed with pump sucker. Next, our self-retaining retractor was positioned so as to bring the mitral valve up into view. Of note was the fact that the mitral valve P2 segment of the posterior leaflet had an abscess associated with it. The borders of the P2 segment abscess were defined by using a right angle to define the chordae which were encircled with a 4-0 silk. After doing so, the P2 segment of the posterior leaflet was excised with a #11-blade scalpel. Given the laxity of the posterior leaflet, it was decided to reconstruct it with a 2-0 Ethibond pledgeted suture. This was done so as to reconstruct the posterior annular portion. Prior to doing so,

care was taken to remove any debris and abscess-type material. The pledgeted stitch was lowered into place and tied. Next, the more anterior portion of the P2 segment was reconstructed by running a 4-0 Prolene stitch so as to reconstruct it. This was done without difficulty. The apposition of the anterior and posterior leaflet was confirmed by infusing solution into the left ventricle. There was noted to be a small amount of central regurgitation. It was felt that this would be corrected with our annuloplasty portion of the procedure. Next, 2-0 non-pledgeted Ethibond sutures were placed in the posterior portion of the annulus from trigone to trigone in interrupted fashion. Care was taken to go from trigone to trigone. Prior to placing these sutures, the annulus was sized and noted to be a *** size for the Cosgrove-Galloway suture band ring from Medtronic. After, as mentioned, we placed our interrupted sutures in the annulus, and they were passed through the CG suture band. The suture band was lowered into position and tied in place. We then tested our repair and noted that there was very mild regurgitation. We subsequently removed our self-retaining retractor. We closed our left atriotomy using 4-0 Prolene in a running fashion. This was done without difficulty. We de-aired the heart. We then gave another round of antegrade and retrograde cardioplegia in warm fashion. The aortic cross-clamp was removed, and the heart gradually resumed electromechanical activity. We then removed our retrograde cardioplegia catheter from the coronary sinus and buttressed this site with a 5-0 Prolene. We placed 2 ventricular and 2 atrial pacing leads which were

brought out through the skin. The patient was gradually weaned off cardiopulmonary bypass and our venous cannulas were removed. We then gave full-dose protamine; and after noting that there was no evidence of a protamine reaction, we removed our aortic cannula. This site was buttressed with a 4-0 Prolene on an SH needle. The patient tolerated the procedure well. We placed a mediastinal #32-French chest tube as well as a right chest Blake drain. The mediastinum was inspected for any signs of bleeding. There were none. We closed the sternum with #7 sternal wires in interrupted figure-of-eight fashion. The fascia was closed with a #1 Vicryl followed by a 2-0 Vicryl, followed by 3-0 Vicryl in a running subcuticular fashion. The instrument and sponge count was correct at the end of the case. The patient tolerated the procedure well and was transferred to the intensive care unit in good condition.