A 61-year-old woman was referred for aortocoronary bypass surgery. At cardiac catheterization, calcifications of the ascending aorta were noted. To assess the exact extent of aortic calcification, we performed an ECG-gated electron-beam CT (EBCT) study of the thoracic aorta. Our image displays a 3-dimensional volume-rendering reconstruction of the EBCT data set, with thresholds set to display calcium-density voxels only. The aortic root is completely encased in calcifications, which extend to the aortic arch. The course of the three main coronary artery territories is outlined by calcific plaques. Bypass surgery was successfully completed after cannulation of the ascending aorta at a plaque-free spot in the aortic arch and occlusion of the aorta by a transventricular balloon technique for initiation of extracorporeal circulation. Complete myocardial revascularization was achieved by a left internal mammary artery bypass to the left anterior descending coronary artery and a venous Y-graft from the brachiocephalic artery trunk to the right coronary artery and the obtuse marginal branch.
Aortocoronary Bypass Surgery in a Patient With Aortic Calcification
Friedrich D. Knollmann and Joachim Knörig

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