adverse events of psoas abscesses [1, 2], spondylodiscitis [1], aortoenteric fistulas [2], and rupture [3]. Other reported arterial sites include carotid [4], popliteal [5], femoral [3], and aortic arch [6].

To our knowledge, this is the first report of a BCG-related mycotic aneurysm in the descending thoracic aorta and the first report of mycotic aneurysm development in a patient receiving therapy for *M. bovis*. In reports, mycobacterial infection is often described as indolent, with delayed diagnosis being common. When the diagnosis is missed initially and open or endovascular grafts are placed without systemic antibiotic therapy, the course is usually an indolent graft infection or pseudoaneurysm and good outcome after reoperation, once systemic therapy is initiated [1, 3]. Another unusual feature of this case was the rapid rate of progression. In only one published case has this been described, with a 4.5-cm mycotic infrarenal aortic aneurysm compared with normal aorta on imaging 1 month earlier [7]. A recent review suggested that current practice patterns underuse BCG for bladder cancer and that future applications of BCG may include prostate and renal cancer [8]. Thus, given that the use of this therapy may grow, so should awareness of the adverse events.

It is concluded that although rare, mycotic aneurysms complicating intravesical BCG treatment present challenges in recognition and treatment. Previous reports describe good outcomes despite delayed diagnosis, once appropriate antibiotic therapy is instituted. In a patient with respiratory symptoms and a history of bladder cancer, suspicion for dissemination, pulmonary tuberculosis, or mycotic aneurysm should be suspected and treated promptly.

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FEATURE ARTICLES

Surgical Treatment of Neonate With Congenital Left Main Coronary Artery Atresia

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Left main coronary artery atresia (LMCAA) is a rare congenital malformation with a nonspecific and varied clinical presentation. Ventricular dysfunction and mitral insufficiency are expected ischemic consequences in the neonatal period. Left internal mammary artery (LIMA) bypass grafting (CABG) is uncommon because of the technical difficulties in performing this procedure in neonates. We describe LMCAA revascularization with a LIMA graft and mitral valve repair in a 7-week-old neonate with successful outcome 1 year postoperatively.

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Congenital left main coronary artery atresia (LMCAA) is an extremely rare abnormality in which the proximal main stem artery ends blindly and blood flows from the right coronary artery (RCA) to the left coronary artery through collaterals. We report successful LMCAA revascularization in a neonate using a left internal mammary artery (LIMA) graft 1 year after coronary artery bypass grafting (CABG).

A 7-week-old male neonate presented to our emergency department with acute exacerbation of difficulty breathing and feeding; he was previously evaluated by his pediatrician at 4 weeks of life. Born at 41 weeks of gestation by normal spontaneous vaginal delivery without postnatal complications, he was referred to the emergency department because of increasing symptoms of cyanosis while crying, as well as diaphoresis, orthopnea, cool extremities, and a new murmur.

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Abbreviations and Acronyms

CABG = coronary artery bypass graft
LAD = left anterior descending
LIMA = left internal mammary artery
LMCA = left main coronary artery
LMCAA = left main coronary artery atresia
MR = mitral regurgitation
MV = mitral valve
RCA = right coronary artery

The patient had normal oxygen saturation, tachypnea with retractions, symmetrical pulses, and harsh grade III/VI murmur in the precordium with radiation to the axilla consistent with mitral regurgitation (MR). A chest roentgenogram showed cardiomegaly and pulmonary venous congestion. A transthoracic echocardiogram showed an atrial septal defect, left atrial enlargement with preserved left ventricular function, and a freely prolapsing posterior mitral leaflet with severe regurgitation. There was an echogenic intracardiac focus consistent with a ruptured cord secondary to an ischemic infarct of the papillary muscle. Considering the history, echogenic intracardiac focus, and progressive symptoms after 4 to 6 weeks of life, the neonate was scheduled for cardiac catheterization to exclude congenital coronary artery anomalies. Angiograms were significant for absence of filling of the left main coronary artery (LMCA) from the aortic root and late-phase delayed filling of the left anterior descending (LAD) and circumflex arteries (Figs 1A, 1B). The LMCA appeared to point toward the aorta with no connection between the coronary and pulmonary systems, confirming the diagnosis of LMCAA.

Cardiopulmonary bypass was initiated in a bicaval fashion for revascularization and mitral valve (MV) repair. Moderate hypothermia (28°C) was induced with cold cardioplegic solution infused antegradely. The LIMA was harvested as a pedicle graft and wrapped in dilute papaverine solution. It was prepared and anastomosed to the LAD in its midportion using interrupted 8-0 polypropylene sutures. On release of the soft clip on the LIMA, a good flush was observed in the LMCA and bulging vasculature of the LAD. Severe regurgitation was visualized through the atrial septum between the anterior leaflets and cleft in the posterior leaflet between the P2 and P3 elements on inspection of the MV. The valve was not stenotic, and the anterior leaflet was of adequate size but with thickened edges. The tips of both papillary muscles were infarcted and partially replaced by fibrous tissue. The chords were thin and mobile. The repair consisted of closing the cleft between P2 and P3 with 6-0 polypropylene sutures and supporting the posterior commissure with a 5-0 polypropylene 2-layered annuloplasty suture. On static testing, the valve was competent. Initially the MV was intact, but gradually symptomatic MR returned. At reoperation 4 weeks later, the MV was repaired without complication. The graft was controlled

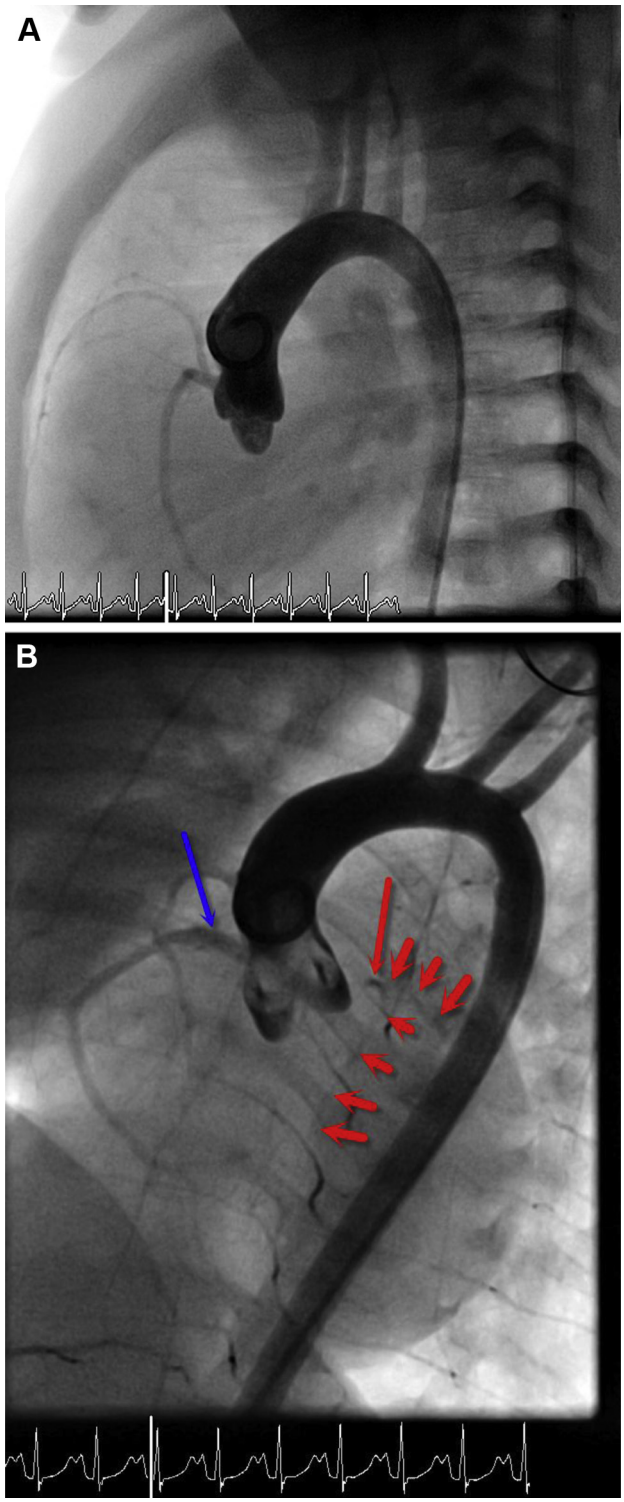

Fig 1. (A) Preoperative aortic root angiogram showing absent left main coronary artery (LMCA) and (B) late retrograde filling of the left anterior descending (LAD) with red arrows indicating the course of the remaining segments of the atretic LMCA and circumflex arteries with blue arrow indicating the origin of the right coronary artery (RCA).