Fenestration of false lumen to reverse acute limb ischemia in type-B aortic dissection

Reena Bansal, Alok Surana and Muhammad Raza
Crozer Chester Medical Center, USA

Introduction: Aortic dissection (AD) is one of the most serious medical emergencies encountered in clinical practice. The incidence in general population is estimated to be 5.9 per 100,000 persons annually. The commonly used Stanford system classifies AD in to type-A (involving ascending aorta) and Type-B (all other). Type-A AD is considered a surgical emergency due to potentially fatal complications like cardiac tamponade and myocardial infarction. Type-B AD is managed medically with tight blood pressure control. However, the associated complication of limb or visceral ischemia due to extrinsic compression by false lumen or occlusion by intimal flap, necessitates a more aggressive surgical versus percutaneous approach. The percutaneous fenestration is not a very commonly performed procedure because of the paucity of exposure. We report this case of lower limb ischemia with Type-B aortic dissection, managed successfully with percutaneous fenestration.

Case presentation: 59 year old man with past medical history of hypertension and smoking presented to the emergency room with chief complaints of sudden onset of right sided chest pain and right lower limb pain. Physical exam was significant for absent right femoral pulse. Cardiac enzymes were negative. A CT scan and lower extremity angiography were performed. The imaging revealed aortic dissection distal to the left subclavian artery with significant occlusion of the right iliac artery by compression thru false lumen. A percutaneous fenestration approach was chosen. 5 F angle tapered Terumo 0.35 wire was passed into the false lumen. Fenestration of the false lumen was performed to return the blood flow to the right iliac artery. Patient tolerated the procedure well and at a 30 day follow up he was still doing well.

Discussion: Type-B aortic dissection is generally managed medically. Critical limb or visceral ischemia is a medical emergency that demands a more aggressive management. The options in such scenario are surgical repair versus percutaneous fenestration. Percutaneous fenestration technique is a less invasive option in such medically treated patients in whom this complication arises.

Biography
Reena Bansal has completed her MBBS from Mysore Medical College and Research Institute in the year 2008 and Masters from Rajiv Gandhi University of Health Sciences in the year 2011. She is currently associated as Resident Physician with Crozer Chester Medical Center since 2014.

Notes: