Retrograde perfusion via the femoral artery has been the perfusion mode of choice in aortic dissection surgery. However, many groups have moved to routine axillary artery cannulation to avoid potential malperfusion and atheroembolic complications associated with retrograde perfusion. However, in cases of hemodynamic instability, the axillary approach is time-consuming. We also have to consider that sometimes the dissection may extend to the innominate artery, with difficulties in the cannulation. Furthermore, even with axillary cannulation and antegrade perfusion, due to the presence of internal flap, there may be a malperfusion syndrome during cardiopulmonary bypass (CPB). This is usually due to the presence of multiple flaps inside the dissected aorta. Alternately, Wada and colleagues [2] reported good results with transapical left ventricular cannulation across the aortic valve into the true lumen guided by transesophageal echocardiography. Jakob and coworkers [3] reported the use of an open direct cannulation of the ascending aorta after exanguination of the patient through the venous line.

All those techniques share together an important point: the importance of true lumen perfusion. We should consider that aortic dissection is an acute disease with often rapid progression. Areas of intact aorta during the diagnosis by CT scan may result dissected at the time of surgery. The dissection may progress, and new intimal tears with new flaps may be present. Cannulation sites thought to be appropriate at the moment of diagnosis may later result insufficient to give an appropriate perfusion for the presence of new flaps. Malperfusion with low flow during CPB will prolong the time to reach the temperature chosen for the circulatory arrest and will predispose to malperfusion of vital organs and incidence of acidosis. The cannulation and perfusion of the true lumen appear then of vital importance.

We had a case where we used a technique similar to the one used by Gobolo. We would add that really, in our case, there was no need to cannulate near the Botallo’s ligament, and that the ascending aorta or the arch, even if dissected, may be cannulated using the Seldinger technique and ultrasound control.

In conclusion, we congratulate again the authors and we look forward to using this technique in particular clinical settings to further improve it.

References


Authors: Salvatore Lentini, Cardiac Surgery Unit, University of Messina, Messina, Italy; Marcello Savasta, Francesco Monaco, Roberto Goeta doi:10.1510/icvts.2008.189878A

We read with interest the paper of Gobolos and co-workers [1], and we congratulate the authors for this precise technique. Retrograde perfusion via the femoral artery has been the perfusion mode of choice in aortic dissection surgery. However, many groups have moved to routine axillary artery cannulation to avoid potential malperfusion and atheroembolic complications associated with retrograde perfusion. However,