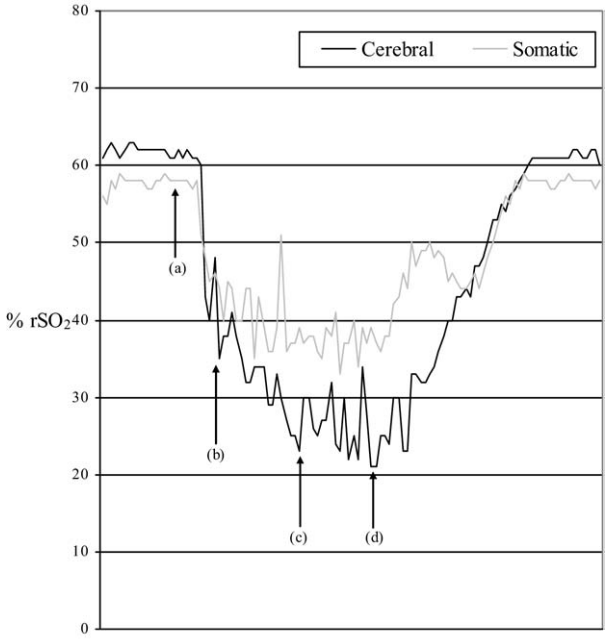

(a) Placement of shoulder roll
(b) Volume bolus
(c) Administration of calcium chloride and epinephrine
(d) Removal of shoulder roll

Fig 1. Cerebral and somatic saturations. rSO_2, regional saturation of oxygen.

We recommend care with positioning in patients with this lesion, avoiding hyperextension of the thoracic spine. To our knowledge, this is the first report of this sequence of events.

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Routine Femoral Artery Pressure Monitoring in Cardiac Surgery

To the Editor:

We read with interest the article titled "Can Femoral Artery Pressure Monitoring Be Used Routinely in Cardiac Surgery?" by Haddad et al.[1] We have been routinely using femoral artery cannulation in cardiac operations (adults and pediatric) since 1990, and

we are of the opinion that this practice is safe and should be encouraged. However, we have made a few changes to improve patient safety that we wish to share with your readers.

In the past 18 years, we have inserted femoral artery cannulae in 13,799 cases; 98% of the cannulations were in the right femoral artery. Cannulation was performed with a 16-G, 5.5-inch catheter in adults, which allows the passage of a 0.036-inch guidewire of the 9F intra-aortic balloon pump (IABP) catheter. In pediatric patients weighing less than 15 kg, a 22-G 10-cm catheter (Arrow International Inc, Reading, PA) was inserted using a Seldinger technique, whereas children weighing more than 15 kg received 20-G catheters. Like Haddad et al,[1] we used radial artery cannulation before 1990. Unreliable arterial pressure monitoring from radial arterial pressures led us to switch over to femoral artery cannulation. Another reason for the change was the ability to quickly insert the IABP catheter through the readily available femoral route, an important advance toward atraumatic insertion of IABPs.

Our standard technique of cannulation is to thread the cannula over a needle after puncturing the anterior wall of the femoral artery. In our series, this was not successful in only 125 patients, and a Seldinger technique was used. Eighteen of these patients had serious bleeding requiring prolonged manual compression. Therefore, the authors believe that the passage of a catheter over the needle by single-wall puncture is safer than the Seldinger technique.

In the early days of femoral artery usage, complications were mainly ischemic. In order to reduce the ischemic complications, identifying high-risk patients was undertaken. During the past 2 years, Doppler examination of the lower-extremity vascular tree was performed in all patients scheduled for cardiac surgery. Of the 1,800 patients who underwent Doppler examination, 78 patients were detected to have decreased femoral arterial flow because of atherosclerotic changes in the iliac and/or femoral arteries. Thirty-eight patients from this group received short-term femoral artery cannulation, and 40 patients had radial artery cannulation, depending on the severity of obstruction. Two patients with ejection fractions less than 0.25 were predicted to require IABP therapy in the perioperative period but had extensive aortoiliac disease; they had intraoperative insertion of the IABP from the distal aortic arch. Doppler assessment of the iliofemoral arterial system is now the standard of care at our institute.

We inserted 756 pediatric femoral catheters, 22-G catheters in 351 patients and 20-G catheters in the remaining 405 patients. We monitored blood stream infections likely to have been caused by the catheters by repeated blood cultures and culture of the catheter tip in all the patients. Seven patients had possible bloodstream infection related to the femoral artery catheter. In these patients, there were more than 4 attempts to cannulate the artery. As a result of this finding, neonates and infant femoral arteries are now catheterized by the senior-most consultant, and every effort is made to successfully place the catheter in the first 1 or 2 attempts. If more than 2 attempts are required, the vessel is decannulated as early as possible.

The incidence of catheter-related infections in our series in the early 1990s was 0.6%. This was reduced to 0.09% in recent years by early decannulation of the femoral artery in the postoperative period. If pressure monitoring was still needed, the radial arterial route was used. Based on reduction in the femoral arterial route as the etiology of systemic infections, we do not perform a culture of the femoral cannula tip routinely anymore.

The authors' contraindications to femoral arterial cannulation are similar to those of Haddad et al.[1] When patients present for cardiac surgery a day or 2 after cardiac catheterization, we cannulate the same femoral artery if the hematoma is small. The presence of a big hematoma is an indication for cannulation of the contralateral femoral artery.

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Antibiotic Prophylaxis for Cardiac Surgery: A Shift Away From Traditional Cephalosporins?

To the Editor:

Cephalosporins have been the antibiotic of choice for prophylaxis in cardiac surgery for decades and are recommended by the 2007 Society of Thoracic Surgeons practice guidelines.[1] Second-generation cephalosporins in particular have been shown to improve outcomes in postoperative wound infection.[2] In addition, cephalosporins have several advantages over other