An alternative technique for cannulation in type A dissection

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Keywords: Cerebral malperfusion • Perfusion technique • Type A dissection

In a recent issue, there was a Great Debate article about cannulation techniques in patients with type A dissection complicated by cerebral malperfusion [1]. Paul P. Urbanski argues for cannulation of the common carotid artery by using a separate incision along the medial margin of the sternocleidomastoid muscle. Jean Bachet gives arguments for the right axillary artery as cannulation site by an infraclavicular opening. It is not mentioned that these approaches can be combined by extending the sternal incision into the right side of the jugulum. The common carotid—and the right subclavian artery (which becomes the axillary artery at the lateral border of the first rib)—can be exposed, and cannulation performed by attaching a graft to one of these arteries, preferably to the subclavian artery as the cerebral circulation is interrupted to a lesser degree. The disadvantage is the scar in the jugulum compared with a more unseen scar below the right extremity of his/her right clavicle. This is hardly possible in patients with a short neck and the extension of the sternal incision in this part of the body might prove to be as difficult, time-consuming and dangerous as the distal approach.

(ii) At this site, the right axillary artery is never or almost never impaired by the dissecting process. Therefore, cannulating this vessel distally may guarantee that the blood will flow into the true lumen of the right carotid, the innominate artery and the aorta during cardiopulmonary bypass and cerebral perfusion. This may not be the case in more proximal vessels such as the right subclavian artery.

(vi) Even though this may appear as a secondary argument when survival is at stake, the cosmetic results of both approaches cannot be compared. It is quite easy (and almost systematic and natural) for any male or female patient returning to a normal life after an operation to hide a scar located below the clavícula. On the other hand, the axillary cannulation can be somewhat time-consuming, particularly in obese and very muscular individuals. In addition, many type A dissection patients have an element of cardiac tamponade at operation and there will be no delay in relieving this by the proposed approach.

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REFERENCE


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Reply to Almdahl

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Keywords: Cerebral malperfusion • Perfusion technique • Type A dissection

We read with great interest the letter by Almdahl [1] concerning the Great Debate article about cannulation techniques in patients with type A dissection complicated by cerebral malperfusion [2].

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The title of this letter [1] suggests that there is an alternative technique of cannulation in acute aortic dissection surgery, which was not mentioned in our contributions. Yet, it is misleading. The author does not describe a new cannulation method but just an approach to the right subclavian and right common artery by extending the sternotomy incision to the neck. He neither gives the reasons for accessing both arteries when using only one for cannulation, nor describes his personal experience with doing so. This approach was not mentioned in the Great Debate paper because we do not recommend it. Such an access does not offer any advantages when compared with separate incisions, neither in elective aortic arch surgery, nor in emergent one, in which fast and simple installation of cardiopulmonary bypass is of utmost importance. The separation of the right common artery and, especially, the right subclavian artery above their origins can be very difficult, time-consuming and connected

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