Abstract

Cannulation and perfusion strategies in aortic surgery

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Cannulation and perfusion in aortic surgery is challenging due to the proximity of the aortic arch vessels to the surgical field. Brain perfusion during surgery is a major concern.

The most common sites for arterial inflow are a high cannulation in the arch, axillary artery cannulation or femoral cannulation. In some cases, direct aortic cannulation of the dissected ascending aorta or transapical cannulation may be relevant.
Venous cannulation may be femoral or right atrial cannulation.

The most common perfusion strategies will be discussed: deep hypothermic cardiac circulatory arrest, circulatory arrest with antegrade or retrograde cerebral perfusion. Modern methods using normothermia with multiple arterial inflow without circulatory arrest will be discussed.

Challenges in thoracoabdominal aneurysm repair will be briefly discussed.