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### 主題:

Minimally Invasive Mitral Valve Surgery - Tips and Tricks

#### 摘要:

Minimally invasive mitral valve surgery has become more and more popular adopted procedure for patients with mitral disease. Avoiding sternotomy, decreasing pain and promoted earlier normal life is the benefit of minimally invasive surgery.

To perform good minimally invasive mitral valve surgery, surgeons have to aware the differences between sternotomy and minimally invasive surgery. Those differences exist in peripheral cannulation, myocardial protection, cross clamp and de-airing procedures.

The tips and tricks for minimally invasive procedures is to minimize procedure related complications and make surgery safe.

# 1. Peripheral cannulation:

Before choosing the peripheral cannulation, the non-contrast CT study is essential to me. Preoperatively it is important to check the quality of abdominal aorta and iliac arteries. If there exist calcified spots on iliac arteries and abdominal aorta, then sonography examination for the femoral artery waveform could provide further information to ensure the adequate perfusion.



When cannulate the femoral artery, common femoral artery is better than superficial femoral artery in terms of distal leg perfusion, and monitoring distal leg perfusion to prevent leg from ischemia.

#### 2. Myocardial protection:

The myocardial protection strategy should be the same with the sternotomy procedures and should base on surgeon's routine preferences and experience. I will address some techniques for indwelling cardioplegia by video.

#### 3. Aortic clamp:

Most of the devastating complications comes from clamping aorta. The clamp should pass through transverse sinus and be careful not injury the left atrial appendage. In addition, take good look at posterior part of aorta, in few patients the high take off right coronary artery is just in the clamping area.

#### 4. De-air:

In minimally invasive surgery, with the aid of CO2, it would be a routine procedure as sternotomy for de-airing.

## 5. Avoid complications:

Surgeons should diminish unnecessary procedure, and aware of danger zones when adopting minimally invasive procedures.

Besides those mentioned above, the expose techniques and mitral valve procedures will be demonstrated by video.