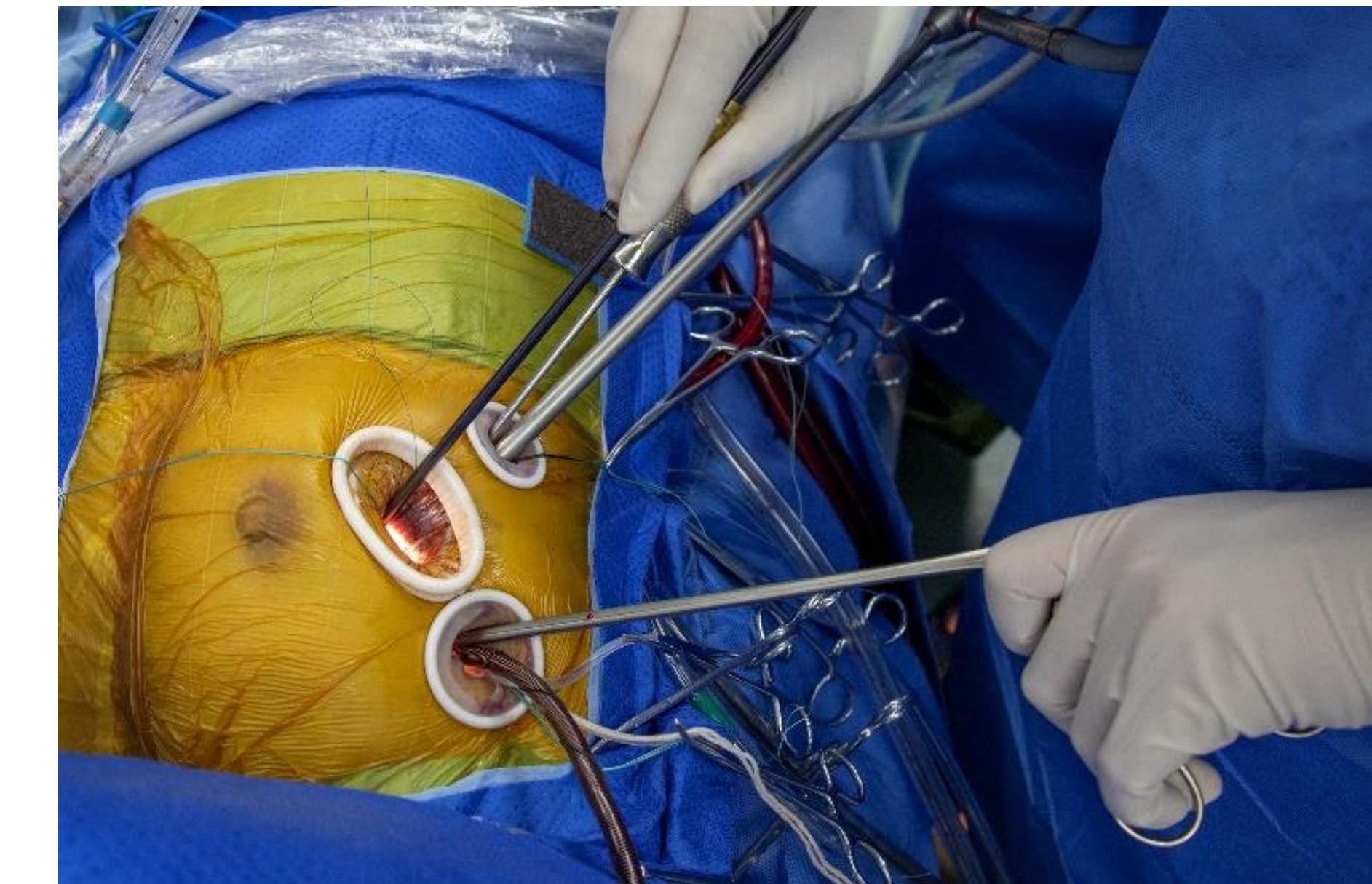




A Protocol-based Strategy to minimally invasive cardiac reoperation for atrioventricular valve

This strategy for minimally invasive cardiac reoperation (MICR) is based on a protocol included the routine use of the following:

- (1)preoperative computed tomography angiography,**
- (2)avoidance of lung injury during the adhesion dissection,**
- (3)appropriative vacuum-assisted venous drainage and arterial perfusion flow,**
- (4)patient grouping based on the implant removalment required or not,**
- (5)no need to dissect the atrium form the pericardium,**
- (6)use of electric scalpel to remove the dysfunctional implant,**
- (7)use of monofilament polypropylene suture in where need great force like posterior annuloplasty.**

