

MANAGEMENT OF COMPLETE ATRIOVENTRICULAR CANAL DEFECT WITH AORTIC ARCH OBSTRUCTION IN THE NEONATE

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Introduction:

The association of complete atrioventricular canal defect (CAVCD) and aortic arch obstruction, including coarctation of the aorta (CoA) and interruption of the aortic arch, is very rare. Because of very limited surgical experience, this group of patients represents a particular challenge for management.

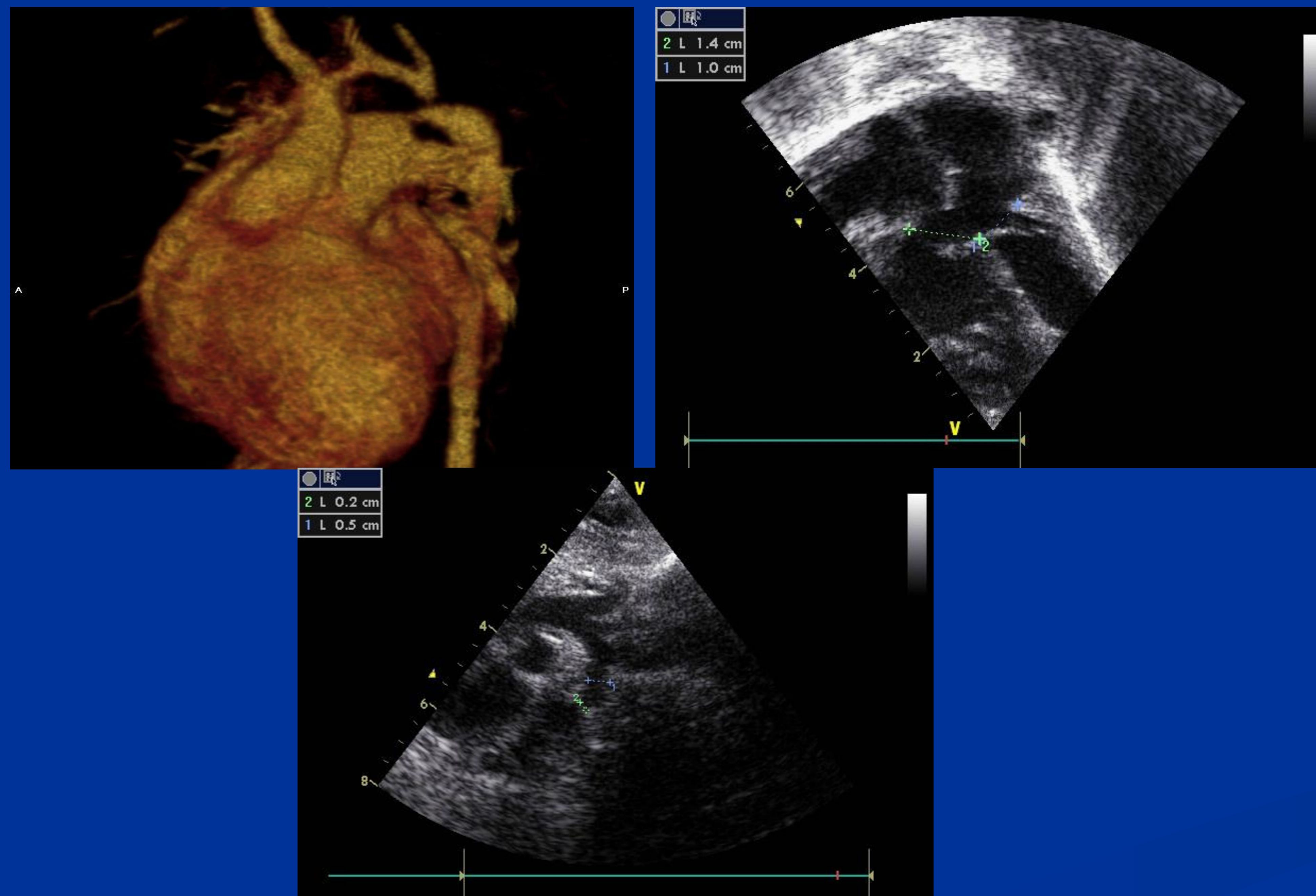
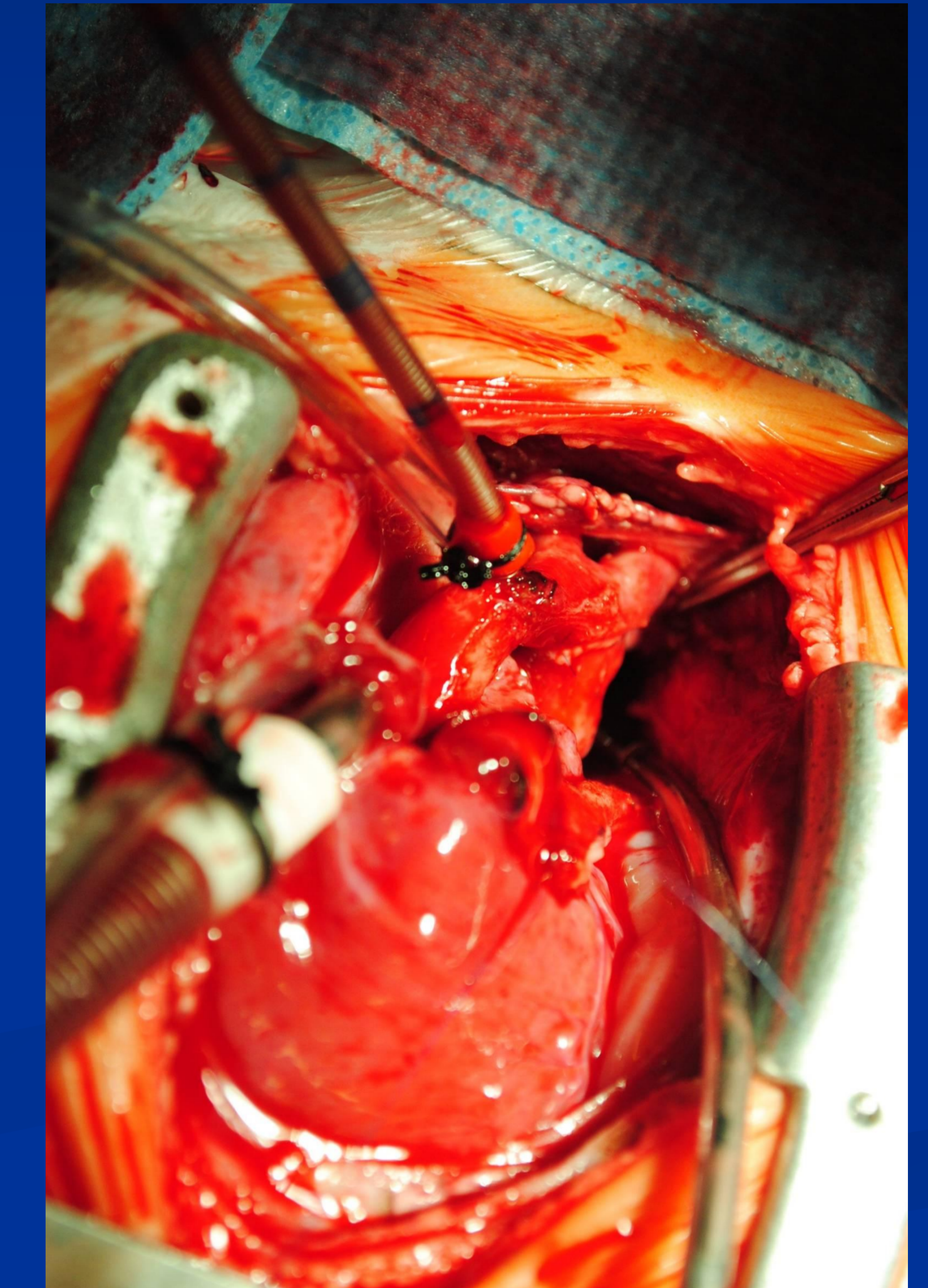
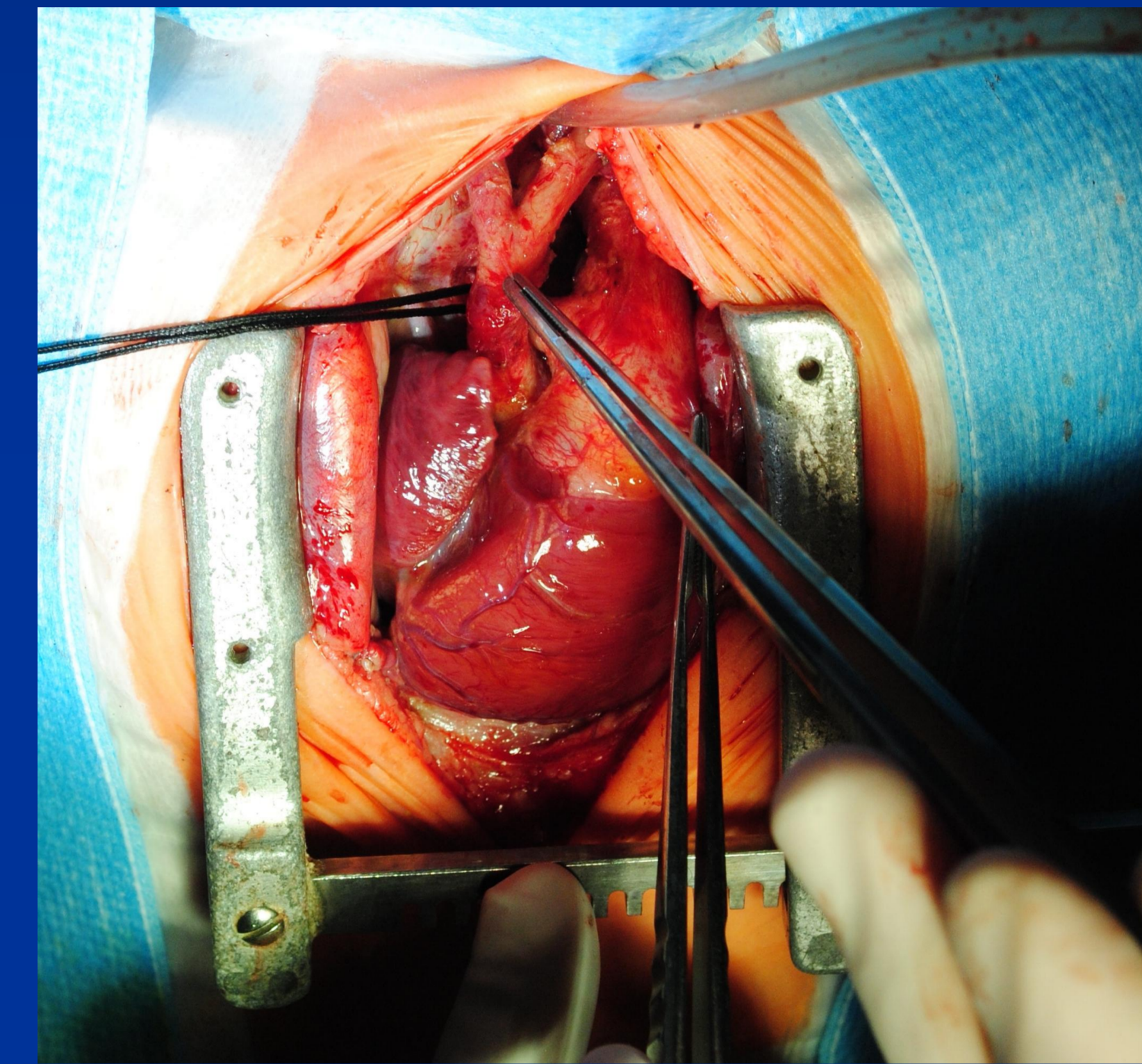
Objective:

We represent two cases of staged surgical correction of complete atrioventricular canal defect with aortic arch obstruction.

Methods:

Two newborn girls, 2 and 10 days of life, were admitted to our hospital at stable condition. In one infant, complex CHD was diagnosed antenatally. Both children have good myocardial and good common AV valve function with minimal insufficiency. Aortic arch anatomy was represented by interruption of aortic arch (type A) in the first and CoA in the second case.

In the first case, the initial procedure, repair of the aortic arch obstruction, was performed through a median sternotomy with CPB, deep hypothermia and circulatory arrest (time of DHCA – 18min.). After arch repair, pulmonary artery band was placed to control pulmonary overcirculation. In the second case, arch repair was performed through a left thoracotomy incision with PAB placement without CPB. ICU stay was 8 and 3 days respectively.



The second stage was performed at 9 and 10 months respectively. Standard repair of the CAVCD was performed through a median sternotomy incision using cardiopulmonary bypass.

Results:

There were no in-hospital mortality and no evidence of surgical complications. 2-years long-term results showed no need of reinterventions.

Conclusion:

Two-stage repair strategy is a reasonable TREATMENT option for newborns and young infants with complete atrioventricular canal defect and aortic arch obstruction. In patients with competent atrioventricular valves and without manifestations of low cardiac output, the staged approach, with the arch obstruction repaired first, shows excellent results with no mortality.