

TOTALLY THORACOSCOPIC CLOSURES RESULTS OF CONGENITAL SEPTAL DEFECTS COMPARING WITH CONVENTIONAL TECHNIQUE

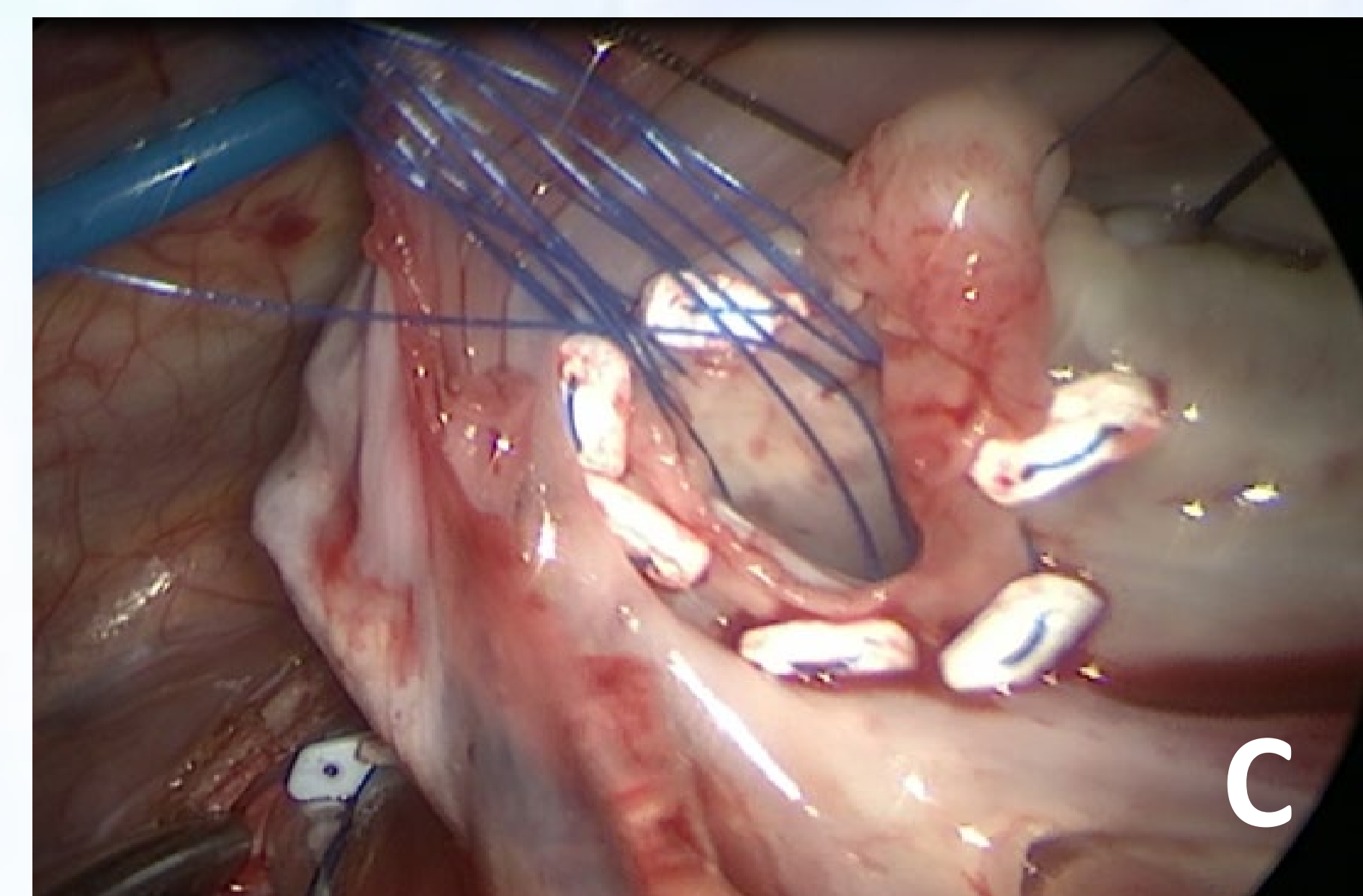
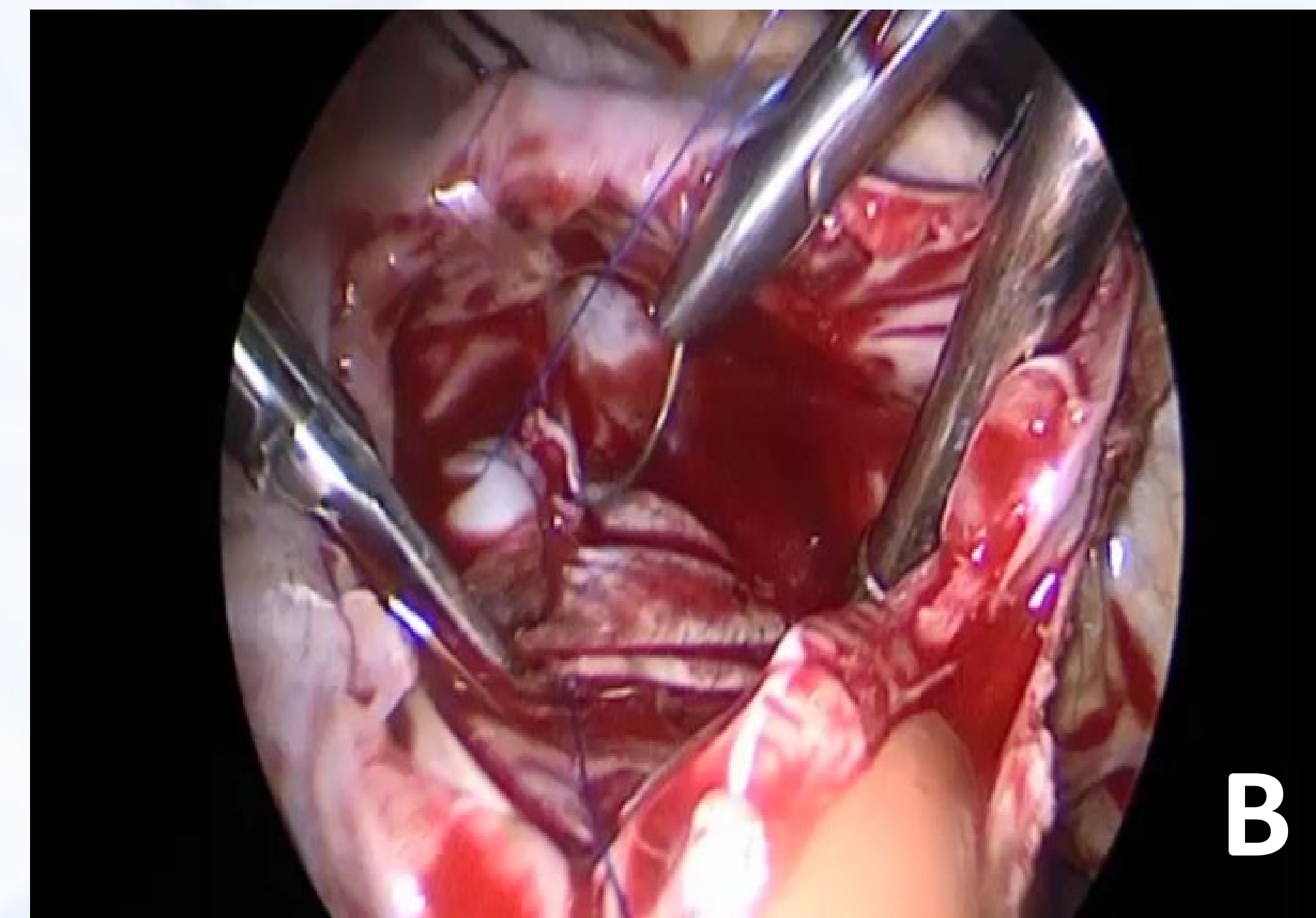
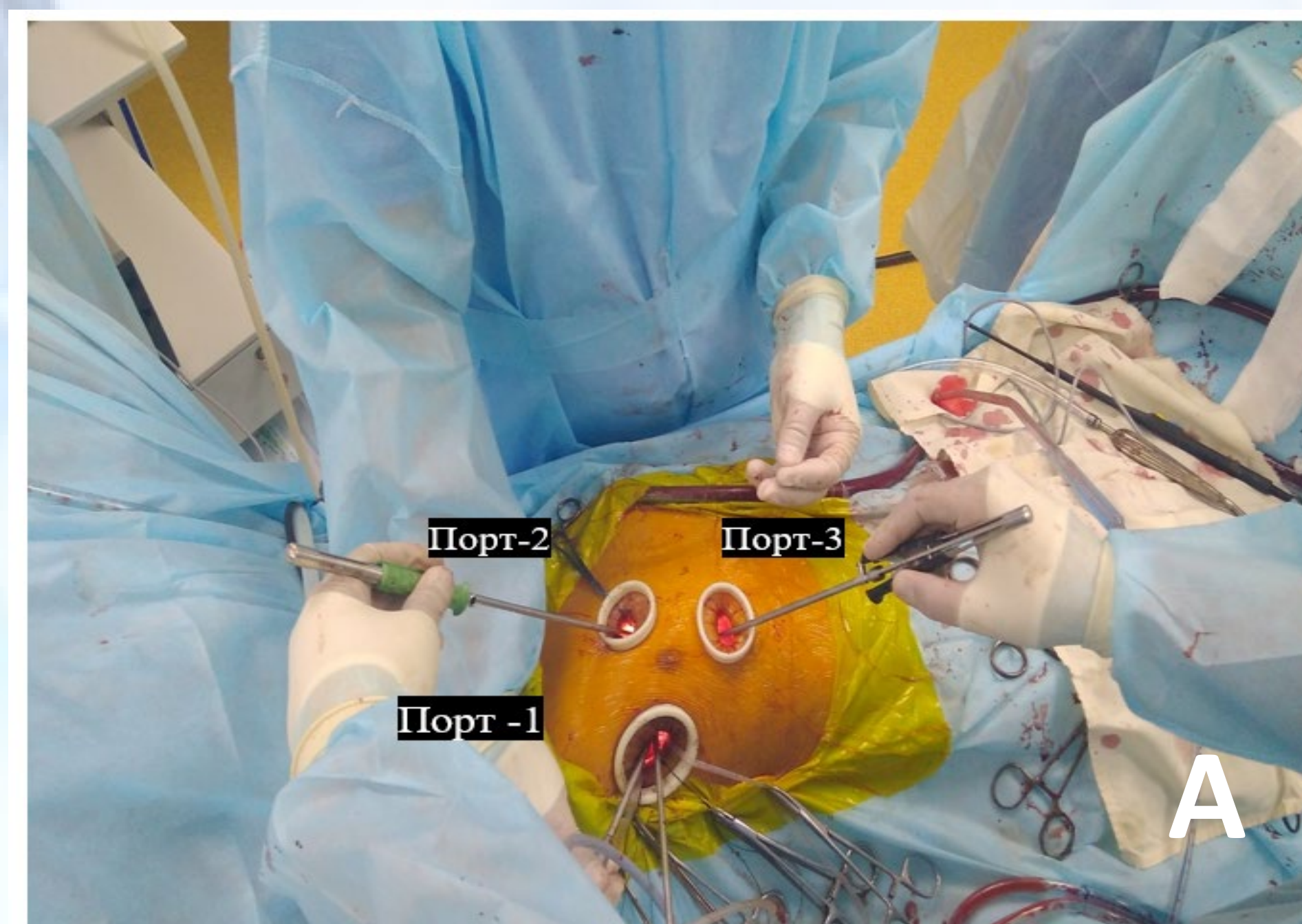
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BACKGROUND

Estimate safety and efficiency of totally thoracoscopic surgical closures of congenital septal defects comparing with conventional technique

METHODS

131 patients after surgical closures of septal defects were analyzed. They were divided into 2 groups: in group 1 - 60 (46%) patients (from them 47 with ASD and 13 with VSD) were operated using thoracoscopic technology, and in group 2 - 71 (54%) patients were operated via median longitudinal sternotomy (from them 43 with ASD and 28 with VSD). Average age and weight of patients in group 1 were 24.1 ± 16.8 years and 49.8 ± 23.1 kg, respectively. The same results in group 2 were 20.1 ± 13.9 years and 43.5 ± 22.8 kg, accordingly. P values were 0.138 and 0.120, respectively. Cardio-pulmonary bypass in group 1 was made peripherally = a. femoral + v. femoral + v.jugular, and in group 2 was done as = ascending aorta + separately cava veins.



A-Three chest ports and femoral cannulation
B-Thoracoscopic closure of ASD
C-Thoracoscopic closure of VSD
D-Skin incision after thoracoscopy

RESULTS

ASD closure was successful and there were no in-hospital mortality or major complications. The total duration of operation in thoracoscopic group was 252 ± 46.7 minutes and in conventional group 204.5 ± 45.1 minutes ($p < 0.05$). CPB time were 65.9 ± 22 vs. 47.5 ± 20.5 min ($p < 0.05$), duration of intensive care stay was 16.6 ± 4.6 vs. 24.9 ± 16.2 hrs ($p < 0.05$), mechanical ventilation time were 172.6 ± 130.2 vs 217.7 ± 88.4 minutes ($p < 0.05$), whereas volumes of operational bleeding were 86.1 ± 31.3 vs 182.2 ± 111.1 ml ($p < 0.05$) and duration of post-operative hospital stay were 6.1 ± 1.3 vs. 8.0 ± 1.8 days ($p < 0.05$) in thoracoscopic and conventional group, respectively. Follow-up transthoracic echocardiography before discharge showed no residual shunts in all patients. It should be noted that the postoperative scar in thoracoscopic group was significantly smaller in its size ($p < 0.05$) than one in the conventional group (6.06 ± 1.1 and 17.4 ± 3.9 cm, respectively), which is especially important from the aesthetic side of the intervention.

CONCLUSIONS

The use of thoracoscopic technology can be done safely and effectively