

**Thoracoscopic Correction Of Congenital Septal Heart Defects:  
Center's Experience:**

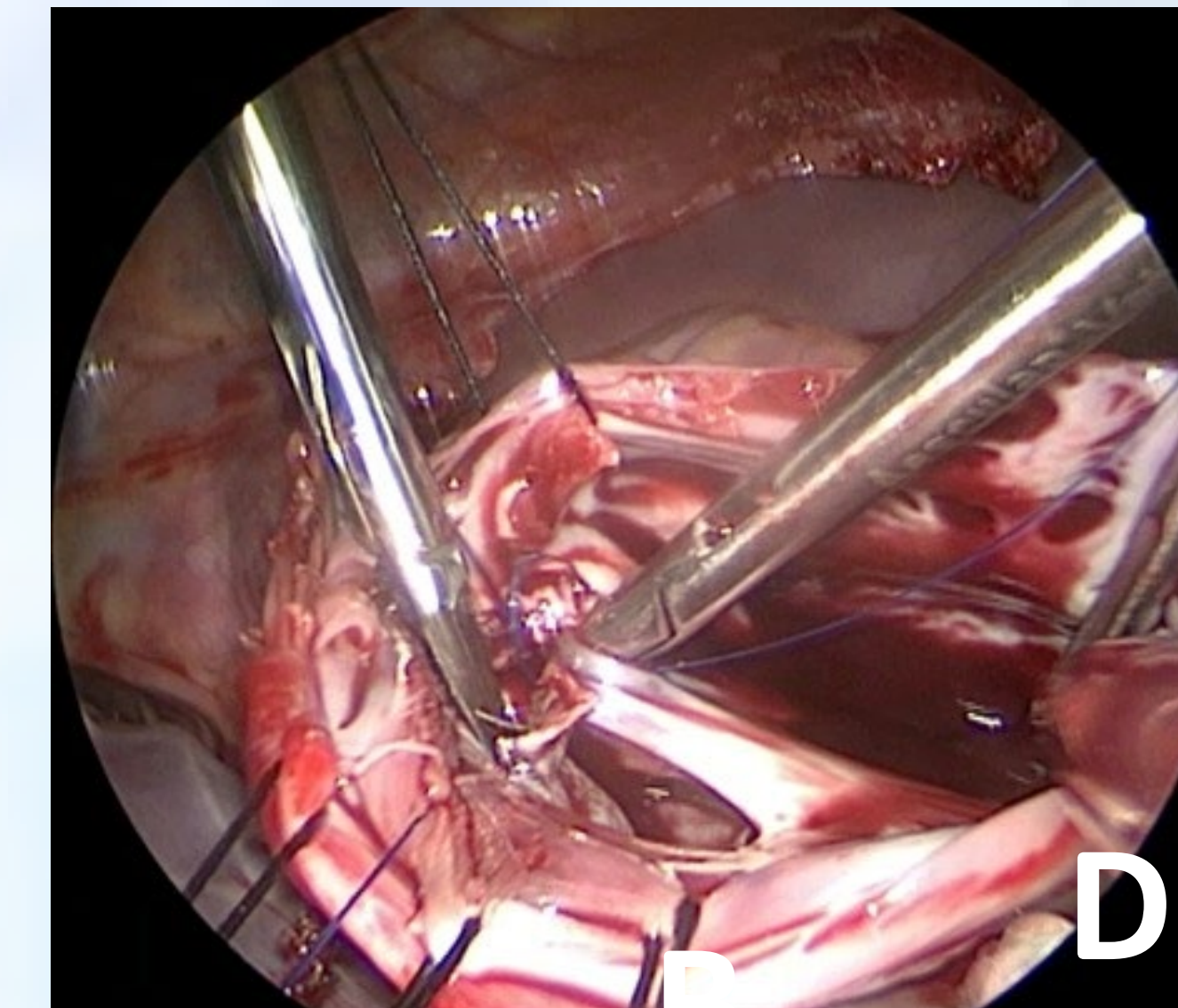
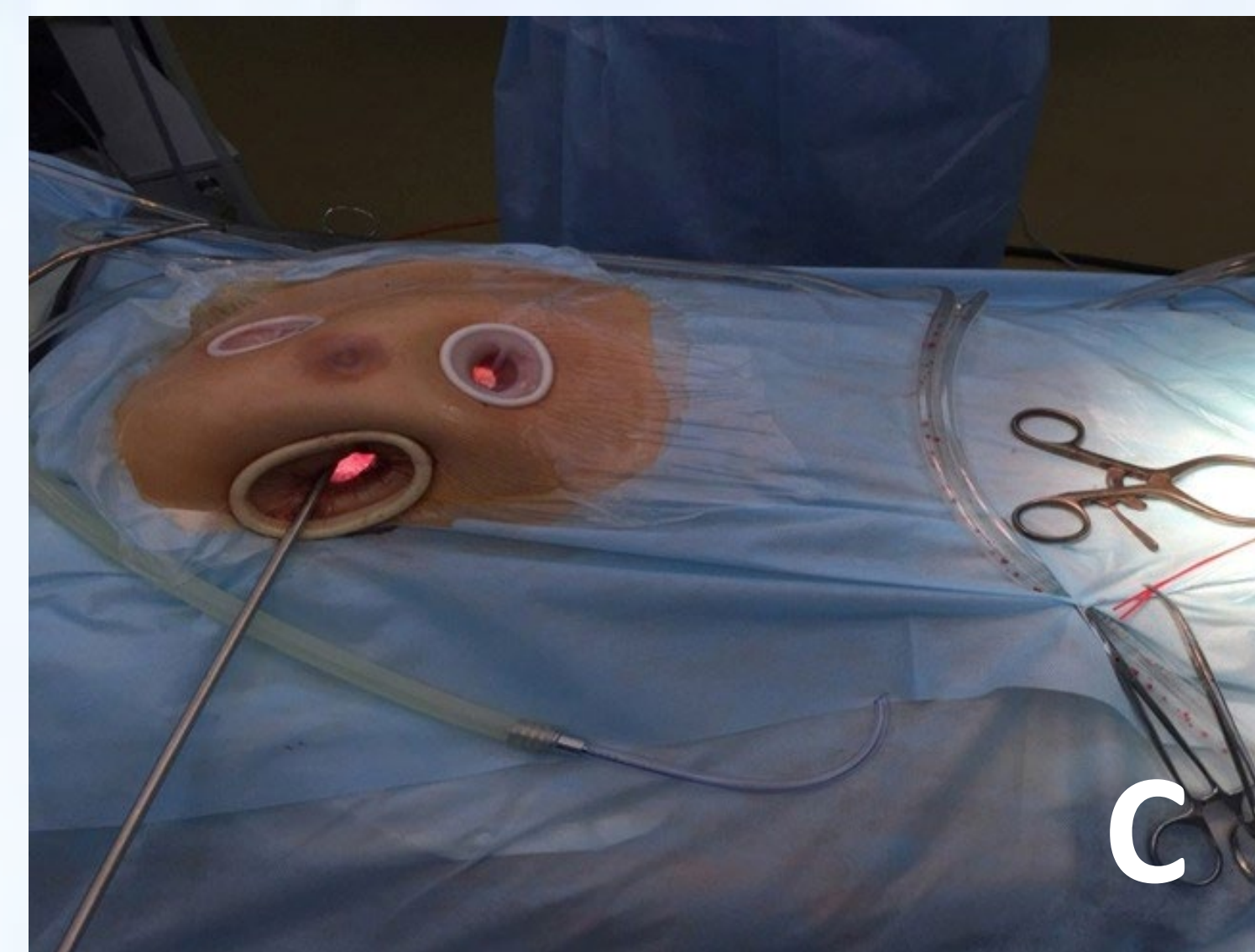
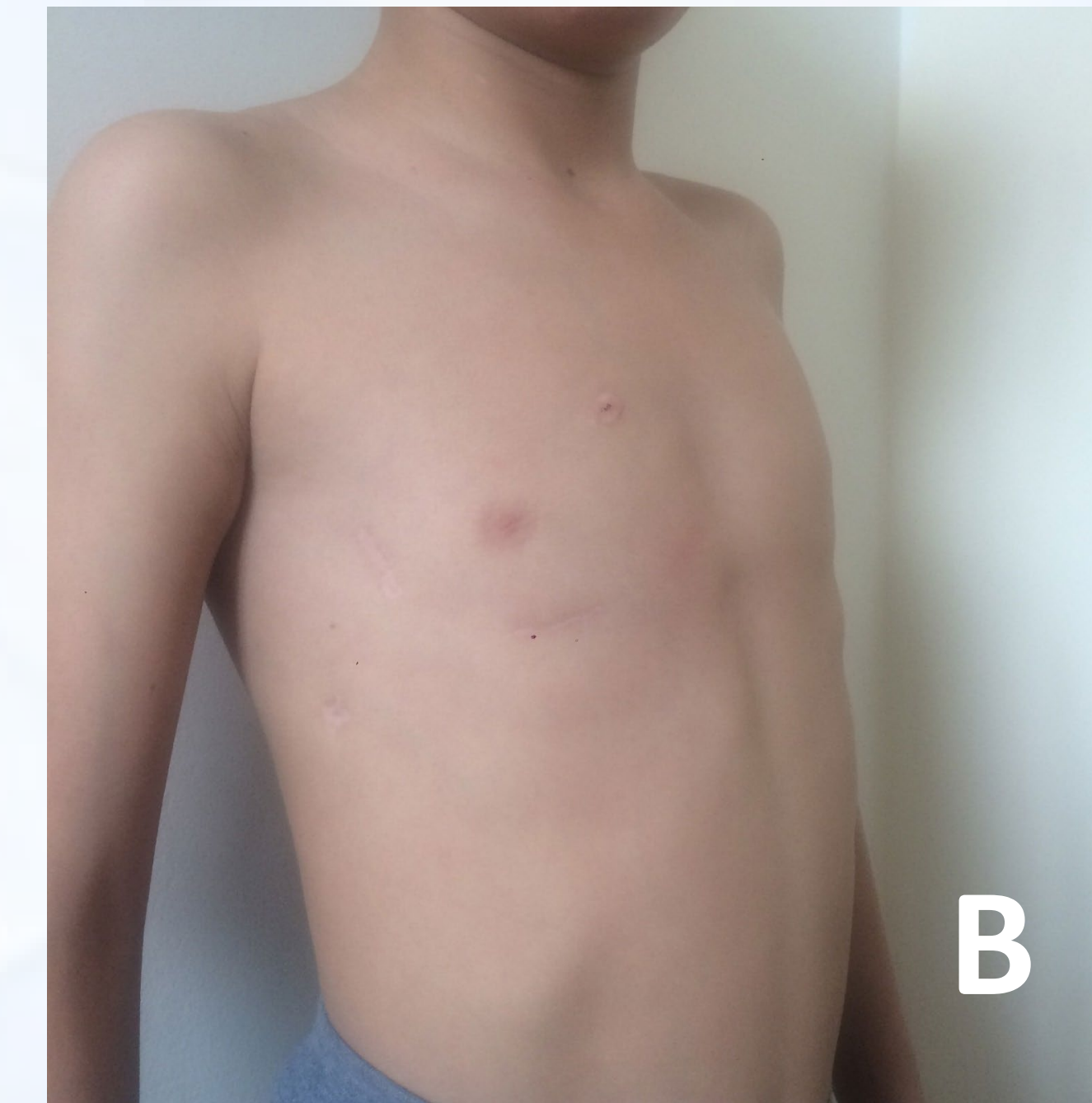
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**BACKGROUND**

Advances in endoscopic technologies and accumulated surgical experience have made thoracoscopic correction of congenital heart defects increasingly widespread, showing good outcomes and low complication rates. However, reports on this technique in Central Asia are limited. This study presents the first experience of thoracoscopic closure of septal defects in Kazakhstan.

**METHODS**

From August 2015, 120 patients underwent thoracoscopic closure of atrial (ASD, n=93) and ventricular septal defects (VSD, n=27), including 82 adults (mean age 41.5 [27-50.8] years, weight 62 [52.5-69] kg) and 38 children (mean age 13 [10-14.5] years, weight 39 [23.5-49] kg). ASD closures were performed on a beating heart under parallel perfusion; VSD corrections used the Chitwood aortic cross-clamp. Cardiopulmonary bypass (CPB) was via peripheral cannulation, with intraoperative transesophageal echocardiography monitoring.



**A,B-Skin incision after thoracoscopy  
C,D-Intraoperative photo**

**RESULTS**

No in-hospital mortality or severe complications occurred. In adults, mean surgery duration was 230 (ASD) and 255 (VSD) minutes; CPB time 58 and 101 minutes; aortic cross-clamp for VSD 69.5 minutes. In children, surgery lasted 240 (ASD) and 260 (VSD) minutes; CPB 48 and 81 minutes; aortic cross-clamp 64 minutes. Blood loss was minimal, ICU stay averaged 16 hours, and hospitalization 6-6.5 days. Pre-discharge echocardiography showed no residual shunts.

**CONCLUSIONS**

Thoracoscopic closure of simple septal heart defects is safe, effective, and provides excellent clinical and cosmetic outcomes, supporting its wider adoption in the region.