PW13TH08: ASSOCIATED CONGENITAL TRACHEAL STENOSES. CORRECTION WITH USE OF CARDIOPULMONARY BYPASS

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AIM OF THE STUDY
Congenital complete ring tracheal stenosis is a severe and potentially lethal malformation, especially in association with abnormalities of heart, great vessels and lungs. The aim was to optimize surgical correction of congenital tracheal stenosis using cardio-pulmonary bypass (CPB).

METHODS
Chest CT and tracheobronchoscopy were used to confirm intrathoracic tracheal stenosis. Surgery was performed under CPB and consisted of segmental tracheal resection (n=3) including reconstruction of tracheal bifurcation (n=2), slide tracheoplasty (n=2), balloon tracheal dilation and stenting (n=1) along with simultaneous closure of ventricular septal defect (VSD) (n=2) and left pulmonary artery reimplantation as a component of vascular ring repair (n=4).

MAIN RESULTS
Six patients aged 8 to 20 (13.0±1.9) months were included to study. The length of stenosis varied from 0.8 to 4.0 cm (2.3±0.5 cm) that was 13.3-83% (44.0±11.2%) of tracheal length. The grade of tracheal narrowing ranged from 60 to 80% (66.7±2.8%). Two patients had bridging bronchus stenosis, another 2 had long segment stenosis. Associated malformations were following: pulmonary artery sling (n=4), VSD (n=2), right lung agenesis (n=1), aberrant right subclavian artery (n=2) and duodenal atresia and cloacal form of anorectal malformation (n=1). Four (67%) patients survived simultaneous surgical correction and have good result for 0.5-8 years. Two (33%) patients died within early postoperative period because of acute respiratory distress.

CONCLUSIONS
Congenital stenoses of intrathoracic trachea have severe course and is often associated with cardiac, great vessels and pulmonary malformations. Surgical correction is possible with simultaneous operations with the use of cardiopulmonary bypass.