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EARLY AND LATE OUTCOMES AFTER SURGICAL MANAGEMENT OF CONGENITAL VASCULAR RINGS

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Persistent respiratory or feeding problems in children may be associated with a congenital vascular ring. Surgical management is fairly standardized, but long-term outcomes are not well described. This study aims to investigate clinical presentation, surgical treatment, and risk factors for early mortality and late outcome. Our database revealed 62 surgically treated vascular ring patients between 1993-2014. Double aortic arch was the most common diagnosis (53%), followed by right aortic arch with aberrant left subclavian artery (39%). A Kommerell's diverticulum was present in 24 patients. Symptoms were mainly respiratory (89%) and feeding problems (32%). Median age at operation was 1 year. Median extubation time and hospital stay were 4 hours (interquartile range (IQR) 2-16 h) and 5 days (IQR 3.8-7.3 days). Mean follow-up was 7.8±5.8 years. Early mortality was 8% and was related to anatomical diagnosis, concomitant anomalies, and need for preoperative intubation. Freedom from residual symptoms at 1 and 6 months was 63% and 82% respectively. Freedom from inhalation therapy at last follow-up was 82% and was influenced by type of vascular ring and preoperative ventilation and dysphagia symptoms always

disappeared. Surgical relief of tracheoesophageal compression is commonly effective in vascular ring anomalies. Respiratory symptoms only persist in a minority of children. Patients with double aortic arch are at increased risk to remain symptomatic, necessitating supportive inhalation therapy lifelong or during intercurrent respiratory infections. Severe repetitive respiratory distress episodes during the first year of life must alert the pediatrician for this clinical entity, as most patients with a vascular ring present early.

Biography

Katrien Francois is a Congenital Cardiac Surgeon at the University Hospital Ghent, Belgium, and currently the Head of the Cardiac Surgery Department at the same hospital. She received her surgical training at the University Hospital Ghent, and congenital cardiac surgery training at Great Ormond Street Hospital for Sick Children, London. She obtained her PhD with a thesis on "Surgical palliation of the functionally univentricular heart". She has published more than 100 papers in peer-reviewed journals.

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