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SURGICAL TREATMENT OF TRACHEAL AND CARDIAC ANOMALIES WITH CARDIOPULMONARY BYPASS IN INFANTS AND CHILDREN

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The paradigm shifts in the care of the patients with combined tracheal and cardiac pathology over the past decade have primarily been in terms of technique of diagnosis, reduced surgical morbidity, decreased length of stay, and, for one diagnosis, acceptance of an more complex operation to prevent later reoperation.

This work represents a group of 34 infants and children underwent surgical treatment of tracheal and cardiac anomalies with the aid of cardiopulmonary bypass. The survival rate of over 94 % is remarkable given the severe pathology and comorbidity involved and the complexity of surgical procedures.

This research do not supports the thesis that a surgical standard of 30% of the total tracheal length is the safe resection length for infants and children. In all patients we have used full median sternotomy and cardiopulmonary bypass and this greatly facilitates exposure, safety, and a better dissection. The uses of CPB facilitate the extensive mobilization of the whole tracheobronchial tree. The use of CPB avoids any additional tension when placing or tying the sutures at the tracheal anastomotic site. In our experience it is the use of CPB, which makes possible longer (above 30%) segments of the trachea to be mobilized, resected and reconstructed with end-to-end anastomosis.

According to this study, the concomitant surgical repair of CTS and complex cardiac anomalies in infants do not carry a higher risk of morbidity and mortality. From pathophysiological point of view it is more reasonable to repair simultaneously both tracheal

and cardiac pathology. Pathologic hemodynamics on top of obstruction of a small-dimension airway with its known particular mucosal reactivity leave very low margins for compensatory mechanisms, especially in respiratory tract infections.

The small number of the patients (problem of the diseases) was a limitation of the study. Although the long-term results for the presented group are excellent, a prediction of results after achieving early adulthood and grown up state is impossible. Therefore a longterm follow - up is necessary for a final judgment of the applied techniques.

