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### Original Article

#### RESIDUAL DEFECTS AFTER SURGICAL REPAIR OF VENTRICULAR SEPTAL DEFECTS IN CHILDREN: INCIDENCE, RISK FACTORS AND FOLLOW-UP

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#### Abstract:

Residual ventricular septal defects (VSD) are major complications after cardiac surgery. We studied the incidence of this complication, risk factors for its occurrence and short-term follow-up in 179 pediatric patients that underwent surgical closure of VSD from April 2003 until May 2004. All data were gathered retrospectively except measurements of shunt ratio. Studied risk factors included age, sex, weight, height, ejection fraction, VSD size, presence of pulmonary stenosis (PS), responsible surgeon, use of patch material for closing VSD, mean degree of hypothermia, cardiopulmonary bypass and aortic cross-clamp times, hemorrhage, documented infection, and surgical approach for defect closure. The incidence of all residual VSDs was 56% and significant ones (*i.e.* with Qp/Qs > 1.5) 22%. The only statistically significant risk factors were higher age, weigh and height of the patients. There was notable but statistically insignificant differences in residual shunt incidence among the patients of different surgeons and with the use of different patch materials. During the median follow-up period of 9.5 months, 35% of the residual defects were closed spontaneously. Six patients underwent catheterization, three of which were candidates of residual VSD closure. As residual VSD is a hemodynamically and psychologically important complication, we recommend VSD closure at lower age and the use of intraoperative epicardial or transesophageal echocardiography to minimize its occurrence.

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