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**Improved weight development and decrease of left ventricular enlargement after interventional closure of small and moderate sized ventricular septal defects.**

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**Introduction:** Ventricular septal defects (VSD) are the most prevalent congenital heart diseases. Large VSDs cause heart failure, failure to thrive and pulmonary hypertension. Surgical closure is indicated early in life. Benefit from closure of small and moderate sized VSD is still unclear. The aim of this study is to evaluate growth and left heart development after interventional closure of small and moderate sized VSD.

**Methods:** Analysis of growth and left heart development before and after interventional VSD closure using NitOcclud Le VSD Coil.

**Results:** After successful and safe interventional closure of small and moderate sized VSDs in 33 patients at mean age of  $6.4 \pm 3.8$  years significant improvement of weight development (improvement of weight for age z-score from  $-0.88 \pm 1.42$  to  $-0.46 \pm 1.31$ ;  $p < 0.01$ ) and decrease of left ventricular enlargement (decrease of left ventricular enddiastolic diameter z-score from  $0.93 \pm 1.12$  to  $0.14 \pm 0.89$ ;  $p < 0.01$ ) could be found in the mid-term follow up after  $2.22 \pm 1.42$  years.

**Conclusion:** Interventional VSD closure of small and moderate sized VSD by NitOcclud Le VSD Coil in paediatric patients is safe, reduces left ventricular dilation and improves weight development in the mid-term follow up.