20th World Congress in Fetal Medicine

Congenital small bowel obstruction: accuracy of prenatal detection and postnatal outcome

Heinrich H, Pijpers AGH, Linskens IH, van Leeuwen E, Eeftinck-Schattenkerk LD, Derikx JPM, Pajkrt E
Amsterdam UMC, Amsterdam, Netherlands

Objective

To evaluate the diagnostic accuracy of prenatal ultrasound in predicting small bowel obstruction (SBO) after birth and to evaluate the outcome of congenital small bowel obstructions (SBO) as well as risk factors for adverse outcome.

Methods

We performed a retrospective cohort study and included all cases with a prenatal suspicion of small bowel obstruction that were referred to the Amsterdam University Medical Centre (UMC), a tertiary Fetal Medicine Center, between 2007-2021. In addition we evaluated all cases that were referred for SBO surgery to the Amsterdam UMC after postnatal diagnosis. Primary outcome was survival after 24 weeks of gestation until the first year of life. Secondary outcome was the positive predictive value of a SBO diagnosis at prenatal ultrasound.

Results

A total of 156 cases of SBO was identified, with a survival rate of 87.1% after 24 weeks of gestation until the first year of age. Intrauterine fetal demise occurred in ten cases of suspected duodenal obstruction, ranging from 30^{+5} – 34^{+6} of gestation. Positive predictive value for prenatally suspected cases of SBO was 89.0% for duodenal obstructions and 88.6% for jejunoileal obstructions. Duodenal obstructions were more frequently detected prenatally than jejunoileal obstructions. Surgical correction was performed in 132/137 (96.4%) of the live born cases. Additional structural or chromosomal anomalies were diagnosed in 48.1%, which were found to have a significant increased risk of adverse outcome.

Conclusion

Congenital small bowel obstructions have an overall favorable prognosis, but are negatively impacted by possible presence of additional structural or chromosomal anomalies. In case of a prenatally suspected small bowel obstruction, additional (sonographic and genetic) testing should be considered to better estimate the risk of adverse outcome.