



Prenatal factors of digestive morbidity at 2 years in left-sided congenital diaphragmatic hernia

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Objective

Management of neonates with congenital diaphragmatic hernia (CDH) has undergone many changes associated with increased survival of high-risk CDH. Follow-up study highlights that significant long-term morbidity exists in CDH infants. The incidence of Gastro-esophageal reflux (GER) depends of the diagnostic methods and is probably underestimated. Prolonged unrecognized GER associated with oral aversion and increased caloric requirement may eventually result in failure to thrive. We focused on gastro-intestinal outcome at 2 years and prenatal predictive factors.

Methods

We assessed 119 CDH between 2010 and 2014 in our centre. Were included 47 fetuses with left-sided CDH and follow up at least until 2 years old. Regression analysis was used to determine the impact of prenatal factors such as Lung to Head Ratio (LHR) and stomach position (grade 1 to 4) on nutritional morbidity at 2 years old.

Results

47 infants have been assessed. After 2 years, GER is persistent in 23.4% infants, and oral aversion in 45% of infants. Exclusive enteral nutrition is acquired in only 40% of stomach grade 4 infants. The risk of GER was increased with the stomach grade (40% in grade 1, 72% in grade 4) and with the LHR o/e (OR 0.95, IC95 0.91-0.99, $p=0.023$). Furthermore, stomach grade is an independent predictive factor of oral aversion at 2 years of age (20% grade 1 to 87% grade 4, $p=0.003$).

Conclusion

CDH infants are at high risk for adverse nutritional outcome. Gastroesophageal reflux remains a major problem at 2 years of age and should probably be better diagnosed. Prenatal assessment of stomach grade is an easy and reproducible factor predictive of gastro intestinal outcome at 2 years.