Outcomes associated with fetal hepatobiliary cysts: a systematic review and meta-analysis

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Objectives

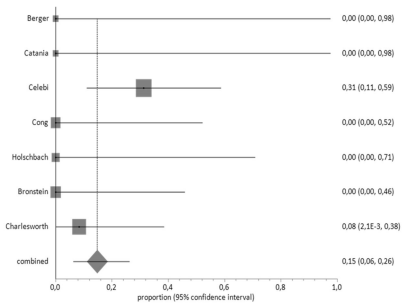
To explore the outcome of fetal hepatobiliary cysts.

Methods

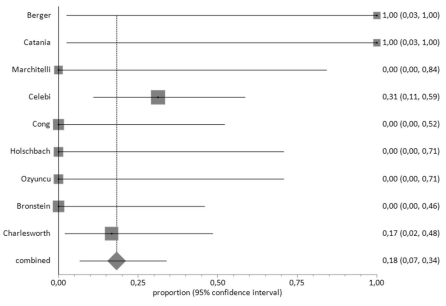
Medline and databases were searched. The outcomes observed were: resolution/reduction and increase in cyst size, associated congenital anomalies of the biliary tract and liver, abnormal post-natal liver function tests, clinical symptoms, need for surgery, post-surgical complications and predictive accuracy. Meta-analyses of proportions were used to analyse data.

Results

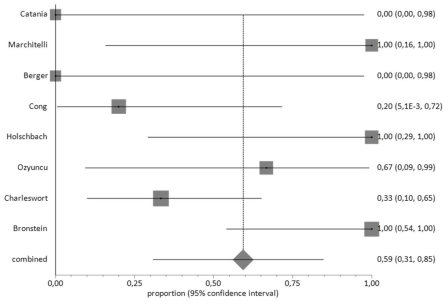
483 ticles were identified and 22 studies (252 fetuses) included in the systematic review.
For fetal hepatic cysts, the rate of resolution or reduction in cyst size either pre or postnatally was 59.3% (95% CI 30.9-84.7), while increase in cyst size occurred in 8.7% (95% CI 1.1-22.4) of the cases. None of the cases of hepatic cyst had associated malformations of the biliary tract at birth.
Clinical symptoms occurred in 14.8% (95% CI 6.3-26.1) of the included cases and in 5.4% (95% CI 0.9-13.6) they were related to the presence of bile obstruction due to the compression of the cyst on the biliary tract. None of the cases of hepatic cyst included in this review had abnormal liver function test at birth. In biliary cysts, resolution or reduction and increase in cyst size occurred in 8.7% (95% CI 2.7-17.5) and 34.4% (95% CI 20.5-49.8) of the cases respectively, while congenital anomalies of the biliary tract, and of the liver, such as fibrosis, occurred in 34.4% (95% CI 20.5-49.8) and 17.4% (5.4-34.4) of the cases. 57.3% (95% CI 33.9-79.0) of the children showed impairment in the liver function after birth, while 55% (95% CI 37.5-71.9) had symptoms, mainly due to bile obstruction (47.9%, 95% CI 29.4-66.7). Post-surgical complications occurred in 10.9% (95% CI 3.7-21.3) of the operated cases. Risk assessment according to different cut-offs of cyst size could not be performed in view of the very small number of included studies.



Symptoms (overall) - hepatobiliary cyst



Surgery – hepatobiliary cyst



Resolution/reduction in size – hepatobiliary cyst

Conclusion

Fetal hepatic cysts are benign condition, with a low likelihood for associated anomalies of the hepatobiliary tract, abnormal liver function or clinical symptoms. Congenital biliary cysts have a high rate of progression, abnormal liver function and clinical symptoms.

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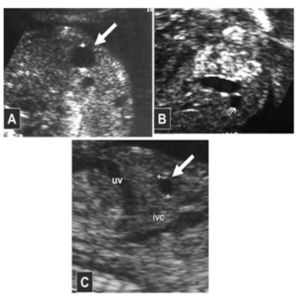

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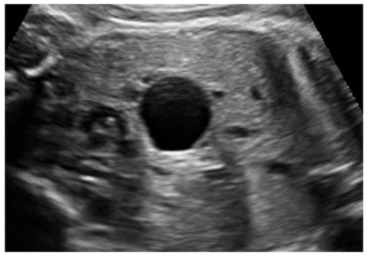

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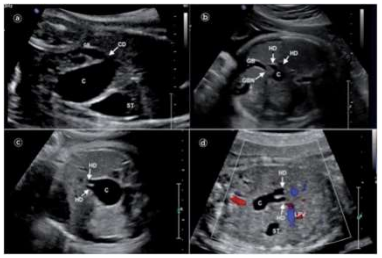

1- *Bronstein M.:* Significance of Early Prenatal Diagnosis of Fetal Hepatic Cyst
2- *Catania DV:* Fetal intra-abdominal cysts: accuracy and predictive value of prenatal ultrasound
3- *Cong X* Evaluation and screening ultrasonic signs in the diagnosis of fetal biliary cystic malformation