CHRD 2021: Abstract & Poster Submission Form

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Research Category:

○ Basic Science

◉ Clinical

○ Community Health / Policy

What was your role in the project?

☐ Design

☐ Perform Experiments

☑ Analyze Data

☑ Write Abstract

☐

Presenter Status:

◉ Undergraduate Students

○ Masters Student

○ PhD Student

○ Post-Doctoral Fellows

○ Residents

○ Non-Trainee

Title

Etiologies and Outcomes of Fetal Diagnosis of Echogenic Bowel in MB

Background

Echogenic bowel (EB) is associated with several fetal abnormalities including aneuploidy, cystic fibrosis, congenital bowel malformations, IUGR, and intraamniotic hemorrhage. However, little is known about underlying etiologies of EB, resulting in minimal follow-up for patients.

Objective

The purpose of this study is to determine the frequency and etiologies of isolated and complex EB at mid-trimester ultrasound.

Methods

This was a historical cohort study (2012-2018). All fetuses with EB were identified using a regional, prenatal genetics clinical database and designated as either ‘Isolated’ or ‘Complex’ depending on the coexistence of additional ultrasound or analyte abnormalities. Stored consult letters and ultrasound reports were reviewed by trained study personnel in a standardized fashion to evaluate covariates and outcomes. Descriptive statistics were used to present demographic data, and the Chi-square, student t-, and Kruskal wallis tests used to compare outcomes between groups depending on data type and distribution. Trends in annual EB referrals were calculated regional livebirths per year as the denominator.

Results

Of the 252 fetuses with EB identified, 232 were eligible and included in the final cohort. The annual frequency of referrals for EB increased significantly over the study period from 0.14% to 0.42% (p=0.038). The majority of referrals were for “Isolated” echogenic bowel (77.3%), remaining cases were classified as “Complex” due to co-existing anomalies, abnormal screening analytes or other soft markers. Only 11.2% of all cases were found to have underlying diagnoses (22.6% of Complex EB cases vs 6.1% of Isolated EB), while the majority remained unexplained. Of those with an underlying diagnosis, anomalies and cystic fibrosis were the most common etiologies in the Isolated EB group; in the Complex EB group, the most common diagnosis was genetic (aneuploidy or syndromic) but no cases of cystic fibrosis.

Conclusion

The frequency of EB referrals has increased during the study period, although the majority of cases are isolated and remain unexplained. Recognition of the differential distribution of underlying diagnoses of Isolated versus Complex EB can assist in counseling of families about individual risks.

Authors

- For each author, please click "**[+] Add Item**" and provide the author's information

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