Maternal Thyroid Dysfunction During Pregnancy And The Risk Of Adverse Outcomes In The Offspring: A Systematic Review And Meta-analysis


BACKGROUND

- Thyroid dysfunction is among the most prevalent endocrine disorders in pregnant women.
- This systematic review aimed to evaluate the available evidence on the association between maternal thyroid dysfunction and adverse outcomes in the offspring.

METHODS

- Systematic review following the PRISMA guidelines;
- Data sources: PubMed, EMBASE and Cochrane Library;
- Performing Meta-analysis of eligible studies;
- Reporting pooled estimates as OR with 95% CI;
- Applying I2 tests to assess the heterogeneity across studies.

ABBREVIATIONS

<table>
<thead>
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<th>Disease</th>
<th>Abbreviation</th>
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<tr>
<td>Attention Deficit Hyperactivity Disorder</td>
<td>ADHD</td>
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<td>Autism Spectrum Disorder</td>
<td>ASD</td>
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RESULTS

- A total of 29 eligible articles were identified through literature search;
- We found associations of maternal hyperthyroidism with increased risk of offspring ADHD (OR: 1.18, 95% CI: 1.04 - 1.34, I2 = 0%); and epilepsy (OR: 1.19, 95% CI: 1.08 - 1.31, I2 = 0%);
- We also found associations of maternal hypothyroidism with increased risk of offspring ADHD (OR: 1.14, 95% CI: 1.03 - 1.26, I2 = 25%); ASD (OR: 1.41, 95% CI: 1.05 - 1.90, I2 = 63%) and epilepsy (OR: 1.21, 95% CI: 1.06 - 1.39, I2 = 0%).

CONCLUSIONS

- Routine measurement of thyroid function test and timely treatment during early pregnancy should be considered for pregnant women;
- Further studies considering a more comprehensive range of confounders and longer follow-up time will be warranted.

PUBLICATIONS

This study has been published on The Journal of Clinical Endocrinology & Metabolism, Aug 2020. https://doi.org/10.1210/clinem/dgaa555

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