Treatment of Intestinal Protozoa in Pregnancy: A Systematic Review of Maternal, Fetal and Infant Outcomes

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Background:

• Parasitic infections in pregnancy necessitate consideration of numerous factors including the potential safety, efficacy developmental outcomes for the mother and baby
• A substantial knowledge gap exists in the treatment of intestinal protozoa infections during pregnancy
• We systematically assessed the current literature regarding the treatment of intestinal protozoa with metronidazole on the safety, efficacy and developmental outcomes for the mother and baby

Methods:

• A literature search was conducted on Medline, EMBASE, CINAHL, Cochrane Library of Systematic Reviews and CENTRAL databases from database inception to June, 2019
• Duplicate articles were removed and title, abstract and full-text articles were systematically double screened and arbitrated by a third reviewer
• Inclusion criteria were as follows: 1) Metronidazole treatment during pregnancy; 2) Diagnosis of intestinal protozoa during pregnancy; 3) Maternal, fetal, or child outcome post drug treatment in pregnant women
• Data were extracted from articles by two reviewers
• Data were summarized using qualitative measures

Results:

Table 2. Data Synthesis Table

<table>
<thead>
<tr>
<th>Study</th>
<th>Study Period</th>
<th>Study Population</th>
<th>Study Design</th>
<th>Trimester of Drug Treatment</th>
<th>Drug Treatment</th>
<th>Treatment and Sample Size</th>
<th>Intestinal Protozoa Identified</th>
<th>Maternal Outcomes</th>
<th>Fetal Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masuda, G 1986</td>
<td>Not stated</td>
<td>1: pregnant woman in first trimester (15 weeks), 30 year old</td>
<td>Case report: N = 1</td>
<td>1st</td>
<td>metronidazole</td>
<td>N = 2, metronidazole (2g) for 10 days</td>
<td>E. histolytica Infection cleared</td>
<td>Live birth</td>
<td></td>
</tr>
<tr>
<td>Read, K.M 2001</td>
<td>Not stated</td>
<td>Pregnant woman in third trimester (31 weeks), 37 years old</td>
<td>Case report: 1 pregnant female</td>
<td>3rd</td>
<td>Pre labour: Metronidazole + Ceftriaxone, Metronidazole + diloxanide furate</td>
<td>N= 1 Pre labour: Metronidazole and IV Ceftriaxone Post labour: 14 day course of metronidazole + 10 day course of diloxanide furate</td>
<td>E. histolytica from serologic tests</td>
<td>Premature labour (12 weeks gestation) Complete resolution of liver abscess</td>
<td>Live birth, normal birth weight</td>
</tr>
</tbody>
</table>

Results:

• Treatment of Entamoeba histolytica with metronidazole during pregnancy cleared the infection in mothers and had no adverse effects on live births
• Limited number of case report studies on intestinal protozoa during pregnancy were available for our review
• No studies on treatment of giardiasis or dientamoebiasis during pregnancy were available

Conclusion:

• Treatment of Entamoeba histolytica with metronidazole during pregnancy does not result in negative maternal or fetal outcomes
• Early diagnosis and treatment with metronidazole is encouraged
• Data on the use of metronidazole in pregnancy for the indication of protozoal infections are scant

References:


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