Can some childhood mental health disorders be prevented?

Long-term risk of psychiatric disorders following neonatal, invasive Group-B *Streptococcus* disease.

A population-based cohort study from Denmark.

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Results:

• 1432 children with iGBS: 1264 with sepsis and 168 with meningitis.

Cumulative risk for any mental disorder:

• iGBS total: 22.6% (95% CI 19.4–25.9%)

• iGBS meningitis 24.6% (95% CI 16.1–34%)

• iGBS sepsis 22.2% (95% CI 18.8–25.8%)

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What we did:

• A national population-based matched cohort study (10:1), 1997-2018, Denmark, using Danish National Healthcare data.

• Exposure: iGBS (0-89 days after birth). Outcome: Psychiatric disorders (ICD-10 codes).

• Cumulative risk was calculated treating death as a competing event.

• Hazard ratio (HR) was calculated with Cox proportional hazards regression including 95% confidence intervals (CIs).

<table>
<thead>
<tr>
<th>Psychiatric disorder</th>
<th>Adjusted HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any psychiatric disorder</td>
<td>1.42 (1.22–1.66)</td>
</tr>
<tr>
<td>Neurotic disorders</td>
<td>1.74 (1.34–2.26)</td>
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<tr>
<td>Mental developmental disorders</td>
<td>1.32 (1.02–1.71)</td>
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<tr>
<td>Emotional disturbances</td>
<td>1.48 (1.19–1.83)</td>
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</tbody>
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Why this study?

• Invasive group B Streptococcus (iGBS) disease remains a leading cause of neonatal and young infant mortality worldwide.

• Infections can cause stillbirth, neonatal death and neurodevelopmental impairment.

• A knowledge gap exists concerning long-term outcomes following iGBS.

• What is the risk of psychiatric disorders?

Take home message:

iGBS was associated with an increased incidence of any psychiatric disorder in later childhood.

Future events can be prevented with a vaccine!