COVID-19 in Children with Brain-Based Developmental Disabilities: A Rapid Review

**Summary**

The Centers for Disease Control and Prevention state that individuals of any age with underlying conditions are at higher risk of developing severe symptoms from COVID-19. Moreover, UNICEF warns that children with underlying disabilities may be at greater risk of developing complications. It is therefore crucial to better understand the clinical impact of COVID-19 on this potentially more vulnerable population.

**Implications**

Children with brain-based developmental disabilities may have underlying health conditions that increase their risk of serious complications from COVID-19.

**What is the current situation?**

COVID-19 has infected millions of people worldwide. Information regarding the impact of COVID-19 in children with brain-based disabilities, or those at risk of developing such conditions, remains scarce.

**What is the objective?**

To assess if children with brain-based disabilities are more likely to be infected by COVID-19, to develop complications from COVID-19 and if they are more likely to have a poorer prognosis once they develop COVID-19.

**How was the review conducted?**

We conducted a rapid review based on the proposed methodology guide of the Cochrane Rapid Reviews Methods Group and following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement. An initial review was conducted in April 2020 and updated in October 2020. In total, 29 studies were included in the analysis.

**What did the review find?**

Studies reported data on 2288 COVID-19 positive children, including 460 with a brain-based disability, and 72 at risk of developing such disability.

Overall, the included studies showed that there is a greater risk to develop severe COVID-19 disease in children with brain-based disabilities, with pre-existing comorbid conditions, and in younger children.

Although mortality is very low among children, the case-fatality rate appears to be higher in children with disabilities, compared to children without disabilities.

Since comorbidities are more frequent in individuals with brain-based disabilities, including children, this may partly explain their higher risk of developing severe COVID-19 disease.

However, most studies included children that were hospitalized from COVID-19 in secondary and tertiary care centers. Results of this review should therefore be interpreted with caution.

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