

## **Risk of Complications in Children With Adrenal Insufficiency and Covid-19**

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**Background:** Adrenal insufficiency may put a person at higher risk with infections due to a lack of normal stress response by the body. Limited data has been available in pediatric adrenal insufficiency with Covid-19

**Methods:** We used TriNetX, with a large COVID-19 database, collecting real-time electronic medical records data. We compared children (0-18 years) who were diagnosed with Covid-19 with and without Adrenal insufficiency. This database collected information from 54 health care organizations

**Results:** Mortality rate in children with Covid-19 and Adrenal insufficiency was 2.246% (19/846). Mortality rate in children with Covid-19 without adrenal insufficiency was 0.097 % (244/252211). Relative risk of mortality for children with Covid-19 and Adrenal insufficiency was 23.2 with a p value of < 0.0001. Endotracheal intubation rate in children with Covid-19 and Adrenal insufficiency was 1.418% (12/846). Endotracheal intubation rate in children with Covid-19 without Adrenal insufficiency was 0.065% (165/252211). Relative risk of endotracheal intubation for children with Covid-19 and Adrenal insufficiency was 21.68 with a p value of < 0.0001. Sepsis rate in children with Covid-19 and Adrenal insufficiency was 6.974% (59/846). Sepsis rate in children with Covid-19 without Adrenal insufficiency was 0.274% (691/252211). Relative risk of sepsis for children with Covid-19 and Adrenal insufficiency was 25.45 with a p value of < 0.00001.

**Conclusion:** Mortality rate, endotracheal and sepsis showed increased association in children with Adrenal insufficiency and Covid-19 versus children with Covid-19 and no Adrenal insufficiency. Further studies with larger sample size are needed to study complication rates of Covid-19 and Adrenal insufficiency.