

FOR EMERGENCY AND HOSPITAL PERSONNEL

COVID-19 – Adrenal Insufficiency and Steroid Dosing Guidelines

7/21/2020

This information sheet is for both adults and children who have suspected or confirmed COVID-19 with acute symptoms.

POINT OF INITIAL CONTACT WITH EMERGENCY PERSONNEL

ADULTS

CHILDREN

IN AMBULANCE EN ROUTE TO EMERGENCY ROOM

Administer 100 mg of hydrocortisone IM or IV

Administer hydrocortisone 25 mg IM or IV for infants and toddlers, 50 mg for school-aged children, 100 mg for adolescents and young adults.

IN EMERGENCY ROOM

Start IV isotonic saline solution, draw blood for labs and then immediately administer 100 mg of hydrocortisone IV¹.

Start IV isotonic saline solution, draw blood for labs¹ and then immediately administer hydrocortisone 25 mg IV for infants and toddlers, 50 mg for school-aged children, 100 mg for adolescents and young adults².

HOSPITAL CARE

ADULTS

CHILDREN

HYDROCORTISONE AND FLUID – ON OR OFF OF A VENTILATOR OR SUPPLEMENTAL OXYGEN

FIRST 24 HOURS: Give hydrocortisone (100 mg IV bolus), followed by 50 mg IV every 6 hours (or 200 mg/24 hours as a continuous IV infusion for the first 24 hours). If hydrocortisone is unavailable, alternatives include prednisolone, prednisone, and dexamethasone. Infuse 2-3 liters of isotonic saline or 5% dextrose in isotonic saline as quickly as possible. Frequent hemodynamic monitoring and measurement of serum electrolytes should be performed to avoid iatrogenic fluid overload. Discontinue fludrocortisone in adults.

AFTER FIRST 24 HOURS: Continue intravenous isotonic saline at a slower rate for the next 24-48 hours. Taper parenteral glucocorticoid over 1-3 days to oral glucocorticoid maintenance dose.

VENTILATOR AND SUPPLEMENTAL OXYGEN CARE – See above for glucocorticoid and fluid recommendations.

Dexamethasone: The COVID-19 Treatment Guidelines Panel (the Panel) recommends using dexamethasone (at a dose of 6 mg per day for up to 10 days) in patients with COVID-19 who are mechanically ventilated and in patients with COVID-19 who require supplemental oxygen but who are not mechanically ventilated³.

As recommended for all affected by COVID-19, patients should rest and counteract the fever by taking 1000 mg doses of acetaminophen every 6 hours in adults They should try to rest and keep well hydrated by drinking regularly².

FIRST 24 HOURS:

Young Adults/Adolescents: See adults.

Infants/Children: Give hydrocortisone 50 mg hydrocortisone/m² (25 mg in infants and 50 mg in children) followed by 50 mg/24 hours in infants and 100 mg/24 hours in children.

AFTER FIRST 24 HOURS FOR ALL PEDIATRIC PATIENTS: Continue intravenous isotonic saline at a slower rate for the next 24-48 hours. Taper parenteral glucocorticoid over 1-3 days to oral glucocorticoid maintenance dose.

VENTILATOR AND SUPPLEMENTAL OXYGEN CARE – The child should be continued on hydrocortisone 3x their usual maintenance dose and up to 100 mg/ m²/day as continued therapy for 24-48 hours as needed².

Dexamethasone: Very few pediatric patients with COVID-19 were included in the RECOVERY trial; therefore, the safety and efficacy of using dexamethasone in these patients are unknown³.

As recommended for all affected by COVID-19, children should rest and counteract the fever by taking appropriate doses of acetaminophen every 6 hours. They should try to rest and keep well hydrated by drinking regularly².

RECOVERY

ADULTS

CHILDREN

Continue intravenous isotonic saline at a slower rate for the next 24-48 hours. Taper parenteral glucocorticoid over 1-3 days or if complicating illness permits, to oral glucocorticoid maintenance dose.

Restart fludrocortisone dose by mouth when saline infusion is stopped.

Continue intravenous isotonic saline at a slower rate for the next 24-48 hours. Taper parenteral glucocorticoid over 1-3 days or if complicating illness permits, to oral glucocorticoid maintenance dose (endocrinologist to advise).

¹ https://www.nadf.us/uploads/1/3/0/1/130191972/adrenal_crisis_alert_flyer_-_children.pdf

² <https://eje.bioscientifica.com/view/journals/eje/183/1/EJE-20-0361.xml>

³ <https://www.covid19treatmentguidelines.nih.gov/dexamethasone/>