COVID-19 in Pediatrics: Management Strategies

Dr. Narendra Singh
“Take Care of the Kids
BUT
BEWARE OF THE KIDS”
## Coronavirus Disease 2019 in Children — United States, February 12–April 2, 2020

<table>
<thead>
<tr>
<th></th>
<th>COVID positive</th>
<th>Deaths</th>
<th>Fatality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kids</strong></td>
<td>2573</td>
<td>3</td>
<td>0.002 %</td>
</tr>
<tr>
<td><strong>Adults</strong></td>
<td>435,128</td>
<td>14,795</td>
<td>3.4 %</td>
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<tr>
<td><strong>Health Care Providers</strong></td>
<td>10 – 28 %</td>
<td>??? &gt; 250</td>
<td></td>
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</table>
Asymptomatic: 4%
Mild: 51%
Moderate: 39%
Severe/Critical: 6%
USA

2573 Cases

147 admissions

( 62 % are infants )

5 ICU Admissions

3 deaths
Comorbidity of Patients

- Normal 46 (33.33%)
- Mod/Severe 44 (31.88%)
- Mild 48 (34.78%)

COVID-19 Confirmed

- 138 Positive
- 3 Confirmed Deaths
- 2302 Tested
- 604 PICU Days
- 171 Sites Submitted Data
1. Very Few Kids get severely Ill
2. Infants and Kids with Chronic illnesses are at risk
3. Kids are the perfect Vectors
1. Assume that they have COVID
2. Symptomatic treatment
3. Discharge Home if possible
4. Isolation for at least 14 days
SEVERE / CRITICAL

1. Admit to single isolation Room
2. CXR, Bloods, Viral Studies
3. IV Hydration
4. Broad Spectrum Antibiotics/ Tamiflu ?
5. Oxygen via nasal cannula to keep SaO2 > 92 %
6. Bronchodilator Therapy: use MDI
SEVERE / CRITICAL

HIGH FLOW NASAL CANNULA (HFNC)

1. Simple circuit

2. Heated (37 d.) and humidified air and oxygen

3. Cannula: 2/3 diameter of the Nares
Principle setup of high-flow nasal cannula oxygen therapy. An air/oxygen blender, allowing from 0.21 to 1.0 FIO2, generates up to 60 L/min flow. The gas is heated and humidified through an active heated humidifier and delivered via a single-limb heated inspiratory circuit. The patient breathes the adequately heated and humidified medical gas through nasal cannulas with a large diameter.
OXYGENATION

HOW DOES IT WORK

ROXYGENATION VENTILATION: CO2
HFNC: Settings

1. 1 – 2 LPM / Kg (Max : 25 LPM)
2. FiO2 : 40 %
3. Use MDI
4. Use PPE
5. Patient wears a mask
CRITICAL: INTUBATION

1. Full PPE
2. Most Experienced
4. NO Bag and Mask
6. Cuffed ET tube preferred
8. Once Intubated Bag with Filter
9. Clamp ETT before you hook up Ventilator
Critical : Mechanical Ventilation

1. LUNG Protection Settings
   - Low tidal Volume: 6-8 mls/kg
   - Keep PIP < 30 cm/H2O
   - PEEP 6 cm H2O and titrate

2. Prone Position

3. Inline suctioning

4. Bronchodilator via MDI through the circuit
SUMMARY

1. Kids have very mild disease
2. Beware of the high risk Groups
3. Protect your Staff
THANKS!

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