Surviving Sepsis Campaign®

SURVIVING SEPSIS CAMPAIGN INTERNATIONAL GUIDELINES FOR THE MANAGEMENT OF SEPTIC SHOCK AND SEPSIS-ASSOCIATED ORGAN DYSFUNCTION IN CHILDREN

VENTILATION RECOMMENDATIONS TABLE

RECOMMENDATION #34	STRENGTH & QUALITY OF EVIDENCE
We were ***unable to issue a recommendation*** about whether to intubate children with fluid-refractory, catecholamine-resistant septic shock. However, in our practice, we commonly intubate children with fluid-refractory, catecholamine-resistant septic shock without respiratory failure.	Insufficient

RECOMMENDATION #35	STRENGTH & QUALITY OF EVIDENCE
We ***suggest not to use*** etomidate when intubating children with septic shock or other sepsis-associated organ dysfunction.	• Weak • Low-Quality of Evidence

RECOMMENDATION #36	STRENGTH & QUALITY OF EVIDENCE
We ***suggest*** a trial of noninvasive mechanical ventilation (over invasive mechanical ventilation) in children with sepsis-induced pediatric ARDS (PARDS) without a clear indication for intubation and who are responding to initial resuscitation.	• Weak • Very Low-Quality of Evidence

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RECOMMENDATION #37	STRENGTH & QUALITY OF EVIDENCE
We ***suggest*** using high positive end-expiratory pressure (PEEP) in children with sepsis-induced PARDS. **Remarks:** The exact level of high PEEP has not been tested or determined in PARDS patients. Some RCTs and observational studies in PARDS have used and advocated for use of the ARDS-network PEEP to Fio2 grid though adverse hemodynamic effects of high PEEP may be more prominent in children with septic shock.	• Weak • Very Low-Quality of Evidence

RECOMMENDATION #38	STRENGTH & QUALITY OF EVIDENCE
We ***cannot suggest for or against*** the use of recruitment maneuvers in children with sepsis-induced PARDS and refractory hypoxemia. **Remarks:** If a recruitment maneuver is considered, the use of a stepwise, incremental and decremental PEEP titration maneuver is preferred over sustained inflation techniques that have not been optimized through direct testing in PARDS patients. All PARDS patients must be carefully monitored for tolerance of the maneuver.	Insufficient

RECOMMENDATION #39	STRENGTH & QUALITY OF EVIDENCE
We ***suggest*** a trial of prone positioning in children with sepsis and severe PARDS. **Remarks:** Research trials in adults with ARDS and children with PARDS have emphasized prone positioning for at least 12 hours per day, as tolerated.	• Weak • Low-Quality of Evidence

RECOMMENDATION #40	STRENGTH & QUALITY OF EVIDENCE
We ***recommend against*** the routine use of inhaled nitric oxide (iNO) in all children with sepsis-induced PARDS.	• Strong • Low-Quality of Evidence

RECOMMENDATION #41	STRENGTH & QUALITY OF EVIDENCE
We ***suggest*** using iNO as a rescue therapy in children with sepsis-induced PARDS and refractory hypoxemia after other oxygenation strategies have been optimized.	• Weak • Moderate-Quality of Evidence

RECOMMENDATION #42	STRENGTH & QUALITY OF EVIDENCE
We were **unable to issue a recommendation** to use high-frequency oscillatory ventilation (HFOV) versus conventional ventilation in children with sepsis-induced PARDS.	Insufficient
However, **in our practice**, there is no preference to use or not use HFOV in patients with severe PARDS and refractory hypoxia.	In Our Practice

RECOMMENDATION #43	STRENGTH & QUALITY OF EVIDENCE
We suggest using neuromuscular blockade in children with sepsis and severe PARDS. **Remarks:** The exact duration of neuromuscular blockade to use in severe PARDS patients has not been determined to date. Most of the adult RCT data and pediatric observational data support treatment for 24–48 hours after ARDS onset.	• Weak • Very Low-Quality of Evidence