

WEB TABLE I RELEVANT STUDIES ON HYPERGLYCEMIA IN THE CRITICALLY ILL CHILD

Study, location*	Type and setting	No	Important findings
Srinivasan <i>et al.</i> [7] Philadelphia, USA	Retrospective; PICU Mechanically ventilated or receiving vasoactive drugs	152	Hyperglycemia (>126 mg%) present in 54% Higher mean BG at 24 in non survivors. Mortality risk due to hyperglycemia: OR 3.4; 95% CI 1.4-8.6 Peak BG and duration of hyperglycemia independently associated with mortality
Faustino and Apkon [23] New Haven, USA	Retrospective; PICU Non-diabetic	942	Hyperglycemia of >120 mg%: 61.8%, >150 mg%: 36.6%, >200 mg%: 16.7% found Risk of in hospital mortality associated with peak BG >150 mg% in first 24 h, peak BG >120 mg% in first 10 d
Branco <i>et al.</i> [24] Cambridge, UK	Retrospective; PICU Bronchiolitis requiring ventilation	50	Hyperglycemia (>150 mg%) present in 72% Not a factor associated with prolonged mechanical ventilation or PICU stay
Day <i>et al.</i> [25] London, UK	Retrospective; PICU Meningococcal sepsis	97	Hyperglycemia of >126 mg%: 90%, >180 mg%: 65%. Peak BG correlated significantly with mortality ( $P<0.001$ ) requiring ventilation and inversely with ventilator free days at 30 days
Branco <i>et al.</i> [26] Cambridge, UK and Porto Allegra, Brazil	Prospective; PICU Septic shock	57	Peak BG $262\pm 110$ mg% in non survivors vs $167\pm 55$ mg% in survivors ( $P<0.01$ ) Peak BG independent risk factor for mortality (OR = 6.1; 95% CI 1.8-21.8)
Wintergrest <i>et al.</i> [27] Stanford, USA	Retrospective; PICU Non-diabetic	1094	Maximal BG of >110 mg% in 87%, >150 mg% in 61%, >200 mg% in 35% with mortality 5.7%, 7.4% and 9.9% respectively. Hypoglycemia found in 18.6%; associated with longer ICU stay and higher mortality. Those in the highest quintile of glucose variability had mortality 15.1% as against 1.3% in the least variable quintile ( $P<0.0001$ )
Hirshberg <i>et al.</i> [29] Salt Lake City, USA	Retrospective; PICU Admitted for >24 hours	863	Hyperglycemia (>50 mg%) in 56%, hypoglycemia (<60 mg%) in 10%. Glucose variability (both hyper and hypoglycemia) in 6.8%. Hyperglycemia and glucose variability associated with increased mortality ( $P=0.004$ ), increased hospital stay ( $P<0.0001$ ) and nosocomial infections ( $P=0.01$ )
Yung <i>et al.</i> [29] Australia and New Zealand	Prospective multicentre; PICUs; Ventilated for >12 hours	409	Peak BG >108 mg% in 89% patients. Independent association of hyperglycemia with mortality (OR 3.3 95% CI 1.26-7.7)
Preissig <i>et al.</i> [30] Atlanta, USA	Retrospective; PICU Mechanically ventilated or vasoactive drug infusions	145	Hyperglycemia (>140 mg%) in 51% Hyperglycemic children required an average of 2.4 U/kg/day of insulin infusion for 6.3 days without any increase in the incidence of hypoglycemia.
Vlasselaers <i>et al.</i> [31] Leuven, Belgium	Prospective, randomized, controlled; PICU	700	Intensive insulin group vs. Conventional control ICU stay: 5.5 d vs 6.15 d ( $P=0.017$ ) Mortality: 3% vs 6% ( $P=0.058$ ) Hypoglycemia: 25% vs 1% ( $P<0.001$ )

BG- blood glucose; OR-odds ratio; CI-confidence intervals