Clinicians should consider propofol infusion syndrome in cases of unexplained metabolic acidosis, ECG changes, and rhabdomyolysis” Hemphill et al (2019).

Abstract:

Propofol infusion syndrome is a rare, potentially fatal condition first described in children in the 1990s and later reported in adults. We provide a narrative review of what is currently known about propofol infusion syndrome, including a structured analysis of all published case reports; child and adult cases were analysed separately as propofol is no longer used for long-term sedation in children. The review contains an update on current knowledge of the pathophysiology of this condition along with recommendations for its diagnosis, prevention, and management. We reviewed 108 publications documenting 168 cases of propofol infusion syndrome. We evaluated clinical features and analysed factors influencing mortality in child and adult cases using separate multivariate analysis models. We used separate multiple linear regression models to analyse relationships between cumulative dose of propofol and the number of features seen and organ systems involved. Lipidaemia, fever, and hepatomegaly occurred more frequently in children than in adults, whilst rhabdomyolysis and hyperkalaemia were more frequent in adults. Mortality from propofol infusion syndrome is independently associated with fever and hepatomegaly in children, and electrocardiogram changes, hypotension, hyperkalaemia, traumatic brain injury, and a mean propofol infusion rate >5 mg kg⁻¹ h⁻¹ in adults. The cumulative dose of propofol was associated with an increased number of clinical features and the number of organ systems involved in adult
cases only. Clinicians should consider propofol infusion syndrome in cases of unexplained metabolic acidosis, ECG changes, and rhabdomyolysis. We recommend early consideration of continuous haemofiltration in the management of propofol infusion syndrome.

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