

**FLUID AND ELECTROLYTE DISTURBANCE****FLUID MANAGEMENT IN DENGUE**

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**Abstract:** *Dengue, an arboviral illness, has the potential to cause significant morbidity and mortality if not recognised and managed appropriately. Treatment is entirely supportive, with fluids being the mainstay of therapy. This seemingly simple intervention can be quite challenging and complex even for the most experienced physician. Most patients can be managed as outpatients with simple oral rehydration measures and by educating the parents regarding warning signs. Those with warning signs and severe dengue need carefully titrated isotonic crystalloids and in some instances, timely use of colloids. Severe bleeding and multi-organ failure is almost always preceded by a period of protracted shock which may have been unrecognised and under-resuscitated. On the other hand, excessive fluid administration may result in fluid overload, massive third space fluid collections and increased mortality. Repeated close clinical monitoring and serial measurement of hematocrit are the key to successful outcomes in children with dengue.*

**Keywords:** *Dengue, Fluid, Crystalloids, Colloids, Shock, Bleeding, Fluid overload, Monitoring, Hematocrit, Children.*

**Points to Remember**

- *Spectrum of clinical presentation of dengue vary from asymptomatic infection to refractory shock, bleeding and multi-organ failure.*
- *The cornerstone of management in hospitalised dengue patients is carefully titrated isotonic, non-dextrose containing crystalloid fluid administration based on perfusion status, blood pressure, serial hematocrit measurements and most importantly urine output.*
- *Timely recognition and treatment of shock is the most important factor in prevention of hemorrhagic manifestations.*
- *Suspect occult bleed in a child with persistent shock even with “normal” hematocrit and in a bleeding child, transfusion of fresh whole blood or fresh packed red blood cells may be needed early to optimise oxygen delivery.*
- *The role of platelets and plasma infusions are very limited in a child with dengue unless he/she is bleeding.*
- *Correction of acidosis, hypothermia and electrolyte abnormalities are as important as control of the source of bleed in a bleeding child.*
- *Fluid overload is most often a preventable complication by rationale fluid and blood products infusion and may be treated with diuretics, non invasive or invasive positive pressure ventilation and drainage of third space collections.*
- *Colloids may have added benefits due to their higher oncotic potential in severe dengue with refractory shock.*

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