

Clinical Description and Treatment Protocol for Hypernatremic Neonates with Na >170 in 2016 in Kijabe, Kenya

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Background: Over the past 5 years, we have seen a significant increase in hypernatremic dehydration in neonates with accompanying acute kidney injury with significant morbidity and mortality.

Methods: After conducting a literature review and a thorough chart review, we developed a protocol for gentle rehydration, treatment of sepsis, and other associated symptoms that included initial resuscitation, monitoring parameters, fluid type and rate, antibiotic choice, imaging, and introduction of feeds. We performed chart review in 2016 after initiation of protocol and refined all parameters.

Results: We admitted 40 babies with hypernatremic dehydration > 170 in 2016. Our mortality rate was 7%(3/40), improved from 100% before initiation of the protocol. Na ranged from 170-235 with Cr from 0.36-8.6. Culture positive sepsis, disseminated intravascular coagulation, intraventricular hemorrhage, and initial creatinine were predictive of mortality after initiation of protocol.

Conclusions: Severe hypernatremic dehydration is a survivable condition in Kenya with appropriate adherence to strict protocols and initial lab and imaging findings can help guide the treatment course and family expectations.