Consultation version of evidence table for 2019 surveillance of NICE NG29

Table 1 Isotonic (0.9%) versus hypotonic (<0.9%) sodium chloride for routine maintenance

Reference	Study type	Sample size	Population	Intervention	Comparator	Outcome	Result
Pemde et al. (2015)	RCT	92	Hospitalised children with suspected central nervous system infections	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Hyponatraemia after 24 hours	Improved with intervention
					0.18% sodium chloride in 5% dextrose	Hyponatraemia after 24 hours	Improved with intervention
Flores Robles et al. (2016)	RCT	151	Hospitalised children with medical or surgical disorders	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Mean plasma sodium level at 8 hours Hyponatraemia Other adverse effects or length of hospital stay	Higher with intervention Improved with intervention No effect of intervention
					0.3% sodium chloride in 3.3% dextrose	Mean plasma sodium level at 8 hours Hyponatraemia Other adverse effects or length of hospital stay	Higher with intervention Improved with intervention No effect of intervention
Torres et al. (2019)	RCT	299	Hospitalised children	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Hyponatraemia at 12 and 24 hours	Improved with intervention

Reference	Study type	Sample size	Population	Intervention	Comparator	Outcome	Result
						Hypernatraemia, metabolic acidosis or other adverse outcomes	No effect of intervention
Bagri et al. (2019)	RCT	150	Hospitalised children	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Hyponatraemia at 24 hours Mean plasma sodium at 24 hours	No effect of intervention Higher with intervention
Kumar et al. (2019)	RCT	168	General paediatric ward (>two-thirds of children had respiratory or nervous system diseases)	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Hyponatraemia at 12 and 24 hours Hypernatraemia	No effect of intervention No effect of intervention
Friedman et al. (2015)	RCT	110	General paediatric unit	0.9% sodium chloride in 5% dextrose	0.45% sodium chloride in 5% dextrose	Mean plasma sodium level at 48 hours	No effect of intervention
Ramanathan et al. (2016)	RCT	119	Very severe pneumonia in a general paediatric ward	0.9% sodium chloride in 5% dextrose	0.18% sodium chloride in 5% dextrose	Hyponatraemia Mean plasma sodium at 6, 12 and 24 hours	Improved with intervention Higher with intervention
Raksha et al. (2017)	RCT	240	Paediatric critical care unit	0.9% sodium chloride in 5% dextrose at standard maintenance rate	0.18% sodium chloride in 5% dextrose at two-thirds standard maintenance rate	Hyponatraemia	Improved with intervention
Shamim et al. (2014)	RCT	60	Hospitalised children	0.9% sodium chloride in 5% dextrose at 60% standard maintenance rate	0.18% sodium chloride in 5% dextrose at standard maintenance rate	Hyponatraemia at 24 and 48 hours	Improved with intervention
Valadao et al. (2015)	RCT	50	Postoperative period in children undergoing appendectomy	2,000 ml/m^2/day of 0.9% sodium chloride in 5% glucose	2,000 ml/m^2/day of 0.18% sodium chloride in 5% glucose	Plasma sodium levels at 24 and 48 hours after surgery Infused fluid volume	No effect of intervention No effect of intervention

Reference	Study type	Sample size	Population	Intervention	Comparator	Outcome	Result
						Urine output	No effect of intervention
Omoifo et al. (2018)	RCT	65	Intra-operative fluids in children undergoing minor surgery	0.9% sodium chloride	0.18% sodium chloride in 4.3% dextrose	Hyponatraemia at end of surgery	No effect of intervention
				Ringer's lactate		Hyponatraemia at end of surgery	No effect of intervention

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