### INDIAN PEDIATRICS

drying with the dryer did not produce colonization with any new organism. Air dryers have the advantage of ready availability and unlimited use. The average time taken for drying hands is about 30 to 45 seconds which might be considered too long in certain situations but this is outweighted by the other obvious advantages. Continuous electricity is essential for routine use of hand dryers which might be a disadvantage in certain units. Concerns about the air blast stirring up the atmosphere with consequent increase in bacterial counts have to be substantiated with well designed studies.

In conclusion, electric warm air dryers appear to be good alternatives for drying hands in NICU's.

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### REFERENCES

- 1. Deobbeling BN, Stanley GL, Sheetz CT, *et al.* Comparative efficacy of alternating hand-washing agents in reducing nosocomial infections in intensive care units. N Engl J Med 1992, 327: 88-93.
- Goldmann G, Larson E. Hand washing and nosocomial infections. N Engl J Med 1992, 327:120-122.
- 3. Ansari SA, Springthorpe VS, Sattar SA, Tostowaryk W, Wells GA. Comparison of cloth, paper, and warm air drying in eliminating viruses and bacteria from washed hands. Am J Infect Control 1991,19: 243-249.
- 4. American Academy of Pediatrics, Guidelines for Perinatal Care, 2nd edn, 1988, p 120.
- Christo GG, Mathai J, Venkatesh A. Citrobacter sepsis in neonates—A clinical and epidemiological study. Indian JPediatr 1990, 37: 781-784.
- 6. Christo *GG*, Mathai J, Venkatesh A. Acinetobacter sepsis in neonates—A clinical and epidemiological study. Indian Pediatr (in press).

# **ORS: Controversies and Perspectives**

This is with reference to the above titled editorial(l). The learned author deserves appreciation for such an informative and well balanced article; however, there are some inaccuracies which are difficult to overlook and as such are pointed out here.

1. Sucrose has been shown to yield on hydrolysis equal concentrations of glucose and galactose(l) (p 897) which is factually incorrect. We all know that a sucrose molecule on hydrolysis yields a molecule each of glucose and fructose (not galactose).

2. The claim(l) 'ORS sachets are

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widely available at no more than 10 cents (in India for approximately Rs. 5/-)' (p 895) is also unfortunately far from realistic. Firstly, 10 cents (US) equal about Rs. 3/- only, secondly, none of the ORS sachets are available for even Rs. 5/- though we all would very much wish them to be within that range. Most of them are priced around Rs. 9/- or even more (barring some smaller sachets meant for 200 ml of water).

3. Lastly and more importantly, the use of the term 'osmolality' is inappropriate at several places. The statements'(1). 'The molar concentration (osmolality) of the salts per litre in the ORS mixture is sodium 90 mMol.' (p 895) and 'According to this the ORS should have in mMol/L Sodium between 60-90..... with total osmolality ranging from 200-330' (p 898) seem to equate molar concentration with osmolality. Moreover, the latter has been expressed without proper units. Firstly, as the context is in per unit volume of solution, the term osmolarity should have been used in place of osmolality. Osmolality is expressed in mOsm/kg of solvent (water) unlike osmolarity which is expressed in mOsm/L of solution; and though the two terms are often confused with each other (as the values are not much different) yet they should not be and cannot be used interchangeably(2-4). Secondly, as regards molar

concentration, though the,total osmolarity (and not osmolality) of a solution in mOsm/L is the arithmetic sum of concentrations of Na<sup>+</sup>, K<sup>+</sup>, Cl" and HCO3" (in mEq or mMol) and glucose (in mMol) in a litre, osmolarity/osmolality and molar concentrations are by no means the same thing.

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### REFERENCES

- Mehta MN. ORS: Controversies and Perspectives. Indian Pediatr 1994, 31: 8-11.
- Rosenblum N. Fluid and electrolytes. *In:* Manual of Pediatric Therapeutics, 5th edn. Eds. Graef JW. Boston, Little Brown and Company, 1994, pp 194-195.
- Vaughan VC. Milliosmolal and milliosmolar solutions. *In:* Nelson Text Book of Pediatrics, 13th edn. Eds Nelson WE, Behrman RE, Vaughan VC. Philadelphia, W.B. Saunders, 1981, p 1559.
- 4. Table 27-9. Composition of commonly used oral and parenteral solutions. *In:* Nelson Textbook of Pediatrics, 14th edn. Eds. Nelson WE, Behrman RE, Vaughan VC. Philadelphia, W.B. Saunders, 1992, p 1846.