

Changing Profile of Undernutrition and Edematous Severe Acute Malnutrition (E-SAM)

Complementary to the correspondence on 'Iatrogenic kwashiorkor' [1], we report 37 cases of edematous SAM (E-SAM) mostly among infants, that we encountered during the period January 2010 to June 2012. This changing profile of undernutrition and occurrence of E-SAM are of great concern in this electronic era, 20 years after initiating 'Breastfeeding policy' in 1992 and 10 years after initiating the Global strategy for Infant and Young child feeding (IYCF) since 2002.

Ever since Prof Cicely Williams described kwashiorkor in 1933, similar cases have been observed in the stereotypic profile of poverty, ignorance and illiteracy or natural calamities like war, famine etc. But, currently cases of E-SAM are noted in settings without the above said risk factors [2]. In our present series of E-SAM, the mothers had basic education, some of them were graduates and had consulted more than one doctor, who focused only on the skin changes and ignored the overall nutritional status. The common causal factors identified were 'man made perception' of lactation failure/breast milk withdrawal and early introduction of very dilute milk formula or dilute starch based liquid diet without any good quality protein like arrow root/banana powder, rice/ragi/oats etc. Animal milk protein is often totally avoided, being branded as an allergen, especially as per the advice from complementary and alternate medicine [3]. The imbalance in the dietary ratio of protein to energy has been clearly implicated in the pathogenesis of E-

SAM [4], the ratio of protein energy to total energy (PE ratio) is a convenient and useful descriptor of one aspect of dietary quality in human nutrition.

Out of the 121 SAM cases, 37 had E-SAM. 10 cases died and one 3 month old E-SAM, who died had florid keratomalacia. These cases were picked up due to a high index of suspicion and were managed as per the 10 steps of WHO SAM treatment protocol. Locally prepared F 75, F 100 and Ready to use therapeutic foods (RUTF) were used (**Table I**).

Promoting optimum breastfeeding and IYCF practices, ensuring a cereal to pulse ratio of 2:1 and desirable protein energy ratio in complementary feeds and family pot feeds, spreading the message of the changing of undernutrition, popularizing growth monitoring and empowering the health team for identifying and managing SAM, especially E-SAM cases are recommended in this context.

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TABLE I LOCALLY PREPARED F75, F 100 AND RUTF

<i>F 75</i>	<i>F100</i>	<i>F100</i>	<i>RUTF</i>
Full cream Milk 30 mlor Infant Milk powder 5 g	Full cream Milk 90 mlor Infant Milk powder 15 g	Skimmed Milk powder 10 g	SAT Mix15 g (Roasted & powdered Rice: Wheat: Black gram: Sugar-1:1:1:2)
Sugar 10 g	Sugar 5 g	Sugar 5 g	Skimmed Milk powder5 g
MCT/ Coconut Oil 2.5 mL	MCT/ Coconut Oil 2.5 mL	MCT/Coconut Oil 2.5 mL	MCT/ Coconut Oil5 ml
Water up to 100 mL	Water up to 100 mL	Water up to 100 mL	Water qs
75 Kcal energy & 1 g protein*	100 Kcal energy & 3 g protein*	100 Kcal energy & 3 g protein*	100 Kcal energy &3 g protein*

*Approximate values