Dietary Treatment of Severe Malnutrition in Adults

Summary of a Published Paper

A recently published paper reports the results of a study conducted by Concern Worldwide on severely malnourished adults in Baidoa, Somalia, a town at the epicentre of the 1992 famine. The severity of the famine was reflected in the large numbers of severely malnourished adults admitted to therapeutic feeding centres. Because adult energy requirements are proportionately less than those of children, the peak incidence of severe malnutrition and death in adults generally occurs later than in children. Up until this famine there had been very little rigorous research on the dietary treatment of severely malnourished adults. Results from studies performed in less severely malnourished subjects, usually in hospital settings, had until recently been extrapolated to the very different circumstances found during war and famine. The conventional wisdom was that adult subjects with body mass indexes of 17-18 respond well to diets with protein-to-energy ratios >19%. Such diets were used in all Concern Worldwide therapeutic feeding centres (TFCs) during the Somali relief operation in 1992-3. However the adults admitted to these TFCs generally had BMIs of 10-13, far less than those who had been studied. They also often had oedema. It was observed that many of these patients, particularly those with oedema were refusing the high protein diets. This led to the hypothesis that the high protein diets may be inappropriate during the initial phase of rehabilitation. Therefore, the aim of the study was to compare the immediate and shortterm effects of a lower-protein diet with those of the conventional higher protein diet. The response to treatment in 573 patients was studied. Mortality, appetite, rates of oedema loss and weight gain in two groups of patients receiving either a higher protein (16.4% of energy from protein) or lower protein (8.5% of energy from protein) diet were compared.
Findings and conclusions

Among oedematous patients the use of the lower protein diet during the initial phase of treatment was associated with a threefold decrease in mortality and accelerated resolution of oedema. Among marasmic patients, no differences in mortality or rate of weight gain were observed. The lower protein diet used in this study was much cheaper and more easily obtained than the conventional higher protein diets in Baidoa Somalia (92-93). Oedema in adults was associated with a much poorer prognosis. The maximum rates of weight gain, typically 10-20 g/kg/day recorded in children recovering from severe malnutrition, are considerably higher than the rate of weight gain reported among adults in this study. However, the pattern of recovery is broadly similar. Initially with a low protein maintenance energy intake, oedematous children often lose oedema within one week. Appetites return and this together with oedema loss heralds the recovery phase. Among the oedematous adult patients, the rates of oedema loss were variable and often much slower. With the low protein diet, some patients lost most of their visible oedema and ascites within a few days, the rapid loss generally being accompanied by watery diarrhoea. In these patients care had to be taken to avoid intravascular hypovolemia (shock occurring from loss of fluid from the circulation). In the absence of guidelines for adults the team aimed at a loss of approximately 0.25 -0.5 litres per day, equivalent to a weight loss of 0.25-0.5 kg per day. Regulation of the rate of oedema loss was achieved by diluting the high energy milk with ORS to an extent dictated by the severity of diarrhoea. In other patients, particularly those receiving the high protein diet, the rate of loss of oedema was much slower and pedal oedema or ascites persisted for weeks. This was accompanied by persistent anorexia and debility.

The study team suggest that the low protein diet based on milk, oil sugar and locally available foods, with a relatively low protein to energy ratio should be offered to all severely malnourished adults in both the initial and recovery phase of rehabilitation.


Taken from Field Exchange 6

www.ennonline.net/fex/6/dietary

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