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ENTERAL FORMULA/PROTEIN-CALORIE STATUS

TUSANA THAWEEKOON : EFFECTS OF HIGH BRANCHED-
CHAIN AMINO ACID ENTERAL FORMULA ON PROTEIN-CALORIE STATUS
IN BURN PATIENTS. THESIS ADVISOR: VICHAI TANPHAICHITR, M.D.,
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This study was intended to evaluate the high-energy and high-protein enteral regimen on protein-calorie status in 12 male burn patients admitted at the Burn Unit, Ramathibodi Hospital from March 7, 1994 to September 24, 1995. Their ages ranged from 21 to 60 yrs and their total burn areas ranged from 10-72% of body surface area with the depth of injury ranging from first to third degree. The results of the study were summarized below.

On admission, these 12 male burn patients had impaired visceral protein status with concomittant inadequate carnitine status and low serum lipoprotein levels. All of them received enteral feeding derived from 3 sources: TraumaCal[®], a nutritionally complete enteral formula containing 1.5 kcal/mL with nonprotein calorie: nitrogen (NPC:N) ratio of 90:1, which was administered through nasogastric tube, oral intake of natural food with high nutritive value; and parenteral glucose for the administration of drugs. Duration of enteral feeding in these pateitns ranged from 21 to 91 days. The beneficial effects of this high-energy and high-protein regimen are evidenced by the achievement of positive nitrogen balance and the significant improvement of visceral protein staus; carnitine status, and serum lipoprotein levels. To achieve positive nitrogen balances, 78.8% calories received from TraumaCal[®], natural food and parenteral glucose was required in 12 male burn patients whereas 97% from TraumaCal[®] and parenteral glucose was required in 5 male burn patients with heavy severity. The optimal NPC: N ratios for high prevalences of positive nitrogen balances in 12 male burn patients were 90.0-129.99:1. There were no adverse effects on their liver and renal functions related to enteral feeding throughout the study.