

NUTRITIONAL MANAGEMENT IN BURNS; OUR STRATEGY IN A DEVELOPING COUNTRY



AUTHORS- DRS Onuh EO¹, Onah I,² Mbah,^{2,3} Agbanusi,² Uzoho AU,⁴ Nwoye OI,² Ochie S.²

¹Plastic and Reconstructive Surgery Unit, National Hospital, Abuja, Nigeria
 ²Plastic and Reconstructive Surgery Unit, National Orthopaedic Hospital, Enugu, Nigeria.
 ³Plastic and Reconstructive Surgery Unit, Enugu State University Teaching Hospital, Enugu, Nigeria
 ⁴Plastic and Reconstructive surgery unit, Federal Medical Centre, Owerri, Imo State, Nigeria.

Correspondence to: Onah I. : anyionah@gmail.com

BACKGROUND

Major burns induces a hypercatabolic state due to the extensive damage of skin! In order to provide adequate nutritional needs; various guidelines and formulae exists.²³ The enteral route is preferred due to its benefits! Although advances in burns care have improved mortality from major burns; this is not the case in Low and Middle-Income Countries (LMICs).

RESULTS



AIM

To present our experience in the management of patients with major burns at the National Orthopaedic Hospital Enugu using our nutritional protocol.

METHODS

This is a retrospective case series of 2 patients with major burns- 75% and 81% TBSA managed within our hospital. The Sunderland formula, dividing it into two parts, providing a half as eggs (boiled) and the other half as a high protein beverage (whey protein). Twice weekly weighing, weekly serum proteins and albumin was done in the patients.



Duration of Wound Healing **3**Months

Length Of Hospital Stay
<hr/> **Months**



Fig 7: Female Participant after intervention (Front View)

DISCUSSION

Adequate nutrition is a crucial component of burn care because of its benefits.

The high caloric requirement in burns makes compliance difficult. Grammatikopoulou et al. found that compliance with the clinical practice nutritional guidelines of the major burn associations was poor⁵ One likely cause may be because they were complex. Although eggs are cheap in developing countries, patient compliance is difficult when all the protein requirement is provided as eggs. Other protein rich sources are also available but expensive. Hirshowitz et al. described their administration of a sorely egg diet to achieve caloric requirement.⁶ Kaufmanetal.modifiedthis.⁷ When our protocol was instituted, diet was easy



Fig 1: Eggs, Whey Protein and Milk Formula



Fig 4: Female Participant before intervention (Rear View)



Fig 5: Female Participant after intervention (Rear View)



Fig 6: Female Participant after intervention (Front View)

to prepare and administer. In complaint patient including the index cases, the beneficial effects was seen as weight gain and improved survival.

CONCLUSION

Survival after major burns occurs in resourcepoor settings. Although the nutritional need is increased in major burns, measures to make intake easy for the patients will ensure compliance.

RECOMMENDATIONS

Despite the importance of nutrition, compliance with calculated amounts is difficult. This method of preparing a protein diet will aid compliance.

REFERENCES

1. Pham CH, Collier ZJ, Webb AB, Garner WL, Gillenwater TJ. How long are burn patients really NPO in the perioperative period and can we effectively correct the caloric deficit using an enteral feeding "Catch-up" protocol? Burns. 2018 Dec;44(8):2006-2010.

2. Holt B, Graves C, Faraklas I, Cochran A. <u>Compliancewith</u> <u>nutrition support guidelines in acutely burned patients. Burns. 2012</u> <u>Aug:38(5):645-9.</u>

3. Clark A, Imran J, Madni T, Wolf SE. Nutrition and metabolism in burn patients. Burns & Trauma. 2017;5(1).

4. Lam NN, Tien NG, Khoa CM. Early enteral feeding for burned patients--an effective method which should be encouraged in developing countries. Burns. 2008 Mar;34(2):192-6.

5. Hirshowitz B, Brook JG, Kaufman T, Titelman U, Mahler D. 35 eggs per day in the treatment of severe burns. Br J Plast Surg. 1975 Jul;28(3):185-8.

6. Kaufman T, Hirshowitz B, Moscona R, Brook GJ. Early enteral nutrition for mass burn injury: the revised egg-rich diet. Burns Incl Therm Inj. 1986 Apr;12(4):260-3.

Fig 3: Protein Milk Shake