

073-P. ENTERAL FISH OIL, BORAGE OIL AND ANTIOXIDANTS IN PATIENTS WITH ACUTE LUNG INJURY (ALI)

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Rationale: Enteral feeding enriched with fish oil and borage oil has been shown to decrease pulmonary inflammation and ventilation need in ARDS. This study compares the effect of a lipid-enriched enteral formula (Pulmocare) to a formula containing fish oil, borage oil and vitamins C and E (Oxepa, Abbott Lab, USA) in patients suffering from ALI.

Method: Fifty two ventilated patients with a $\text{PaO}_2/\text{FIO}_2 \leq 250$ and tolerating enteral feeding were prospectively randomized to receive Pulmocare (P) or Oxepa (O) according to resting energy expenditure. Respiratory, metabolic and nutritional parameters were followed daily for 2 weeks and length of ventilation of ICU and hospital stay were assessed.

Results: The 2 groups were comparable in terms of age, sex, APACHE II, albumin level and $\text{PaO}_2/\text{FIO}_2$ on baseline. Body mass index was significantly higher ($p \leq 0.002$) in O. Respiratory compliance improved in O ($p \leq 0.005$), but oxygenation did not increase more in O. Resting energy expenditure, oxygen consumption and carbon dioxide production were increased in O in relation to the larger body mass index. Nutritional parameters (albumin and prealbumin) were unchanged. Patients who received O had a significant ($p \leq 0.05$) shorter length of ventilation (194 +/-142 vs 332 +/-225 hrs) and length of ICU stay (251 +/- 168 vs 335 +/-253 hrs). Hospital stay and mortality were not different in the two groups.

Conclusions: Patients with ALI receiving fish oil, borage oil and antioxidants enriched formula showed an improvement in lung mechanics, a reduction in length of ventilation and in ICU stay. These results suggest that this antioxidative formula may be a useful adjuvant therapy in acute lung injury.