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Effect of early postoperative enteral immunonutrition on wound healing in patients undergoing surgery for gastric cancer.

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Abstract

BACKGROUND & AIMS:

One of the most frequent complications in patients with cancer and malnutrition is the surgical wound healing delay or failure. Some studies have shown that arginine improves wound healing in rodents and in healthy human beings. The main objective of this study was to assess the effect of early postoperative enteral immunonutrition on the wound healing process in patients undergoing surgery for gastric cancer.

METHODS:

Sixty six patients with gastric cancer were randomized to receive early postoperative enteral immunonutrition (formula supplemented with arginine, omega-3 fatty acids and ribonucleic acid (RNA)) or an isocaloric-isonitrogenous control. Assessment of wound healing process: (1) Quantification of hydroxyproline deposition in a subcutaneously placed catheter, (2) occurrence of surgical wound healing complications.

RESULTS:

Sixty patients were analyzed. Patients fed with immunonutrition (n=30) showed higher local hydroxyproline levels (59.7 nmol (5.0-201.8), vs. 28.0 nmol (5.8-89.6) P=0.0018) and significantly lower episodes of surgical wound healing complications (0 vs. 8 (26.7%) P=0.005) when compared to patients fed with the control formula (n=30).

CONCLUSIONS:

Early postoperative enteral nutrition with a formula supplemented with arginine, omega 3 fatty acids and RNA increased hydroxyproline synthesis and improved surgical wound healing in patients undergoing gastrectomy for gastric cancer.

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