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EFFECTS OF GLYCINE ON COLLAGEN EXPRESSION AND NEUTROPHIL INFILTRATE IN 5-FLUOROURACIL-INDUCED ORAL MUCOSITIS IN HAMSTERS

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Glycine is a simple nonessential amino acid with potential immunomodulatory and anti Inflammatory effects in model animals including Oral Mucositis (OM); however, the mechanisms involved are not well understood. The aim of this study was to investigate the mechanisms of action of Glycine on chemotherapy- induced oral mucositis, as related to effects on collagen expression and inflammation.A hamster cheek pouch model of oral mucositis was used by all animals receiving intraperitoneal 5-fluorouracil, followed by surface irritation. Animals were randomly allocated into two groups and treated with a glycine 5%, or no supplemented. Clinical severity of mucositis was assessed by two blinded examiners on D7. Buccal pouch, tissue was harvested from all animals on day 7. Collagen was qualitatively and quantitatively evaluated after picrosirius staining. The density of the neutrophil infiltrate was also scored. The reduced severity of mucositis in the Glycine group was accompanied by a decrease in the number of neutrophils and an increase in the proportion of mature collagen as compared to the control group. The total quantity of collagen was significantly higher in the control group at the day 07 time point, as compared to the Glycine , with a more prolonged inflammatory response in the control group This study supports two mechanisms of action for Glycine in reducing mucositis severity. The increase in collagen organization in response to the Glycine group indicates that Glicine promotes wound healing. In addition, Glycine also appears to have an anti-inflammatory effect, as evidenced by the reduction in neutrophil infiltrate.

Biography

Odara Maria de Sousa Sá has been Graduated from UNINOVAFAPI University, PhD and Master in Pediatrics and Pediatric Sciences at the Federal University of São Paulo. Improving the MD. ANDERSON / Pediatric Oncology. Currently is Editor of Health magazine Coordination Focus, coordinator of graduate nutrition Clinical and functional College St. Augustine (FSA) and professor of Nutrition FSA course. Has experience in Nutrition, with emphasis on Oncologic and Functional Clinica. Presently he is working at the in the Sao Paulo City.

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