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ROLE OF VITAMIN A IN MOUSE GASTRIC STEM CELL LINEAGES

by

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Abstract

Vitamin A is known to regulate functions of various body organs in health and disease, but there is very little and dispute information regarding its role in the stomach. The aim of this study was to investigate the function of vitamin A in the gastric gland using a vitamin A-deficient mouse model. Results from this study revealed that mice deficient in vitamin A for 8 months acquire a small stomach with relatively enlarged fundus and a protruding limiting ridge with glandular dilatations at the junctional epithelium. These findings were associated with a decrease of stem cell proliferation and alterations of multiple cell lineages involved in the production of different protective and aggressive factors. This study provides insights into the importance of vitamin A for gastric glands and gives a warning signal for gastroenterologists that vitamin A deficiency can affect human stomach homeostasis and lead to pathological lesions.

Keywords: Stem cells, Cell proliferation, Gastric glands, Vitamin A deficiency.