

HISTOLOGICAL STUDY OF THE EFFECT OF STEROIDAL AND NON STEROIDAL DRUGS ON MAXILLARY SINUS

A Thesis

Submitted to the College of Dentistry

University of Baghdad

In Partial Fulfillments of the Requirements

For the Degree Of Master of Science in

Oral Histology & Biology

By

Sahar Khanam Alias Al-kazaz

B. D. S

Supervised by:

Prof. Dr. Athraa Yahya Al-hijazi

B. D. S, M. Sc, ph. D (Oral Histology)

ABSTRACT

Back ground: Maxillary sinus is one of the paranasal sinuses which are air cavities located bilaterally in the bone of the face and maxilla ,it has a communication with the nasal cavity. The use of decongestive nasal drops have an obvious importance on nasal mucosa, as histological findings illustrates epithelial changes.

Aim of the study: Assess the influence of steroidal and non steroidal nasal drops/spray on maxillary sinus (histological finding in vivo).

Materials and Methods: Forty five albino rabbits ,weight (1-1.5 kg) and of age (6-12months).

The animals divided into 3 groups

1. First experiment group consist of 15 rabbits were given Beclomethasone Dipropnate nasal sprays.
2. Second experimental group consist of 15 rabbits were given Oxymetazoline Hcl nasal drops.
3. Control group consist of 15 rabbits were given normal saline nasal drops.

Each animals received 2 drops/sprays ,one on each nostrils 2 times daily The animals were scarified (5 rabbits from each groups) at intervals period 2, 4, 8 weeks.

Maxillary sinus studied histologically by Hematoxylin and Eosin stain and histochemically by Periodic acid-Schiff stain.

Results: Epithelial changes(epithelial hyperplasia) was observed in maxillary mucosa after administration of Beclomthasoline nasal sprays, with excessive secretory mucus covered surface area. While Oxymetazoline HCl nasal drops shows ciliary loss, spongiosis and atrophic changes in goblet cells. Normal saline nasal drops shows epithelial spongiosis. Lamina propria shows dilated blood vessels with edema and infiltration of inflammatory cells.

Conclusion : steroidal and non steroidal nasal drops/sprays induced injury to maxillary mucosa and was more pronounced with prolonged duration of use.