

January 1994
VOLUME 40 NO.1

EGYPTIAN DENTAL JOURNAL

E D J



DEMONSTRATION OF T-CELL SUBSETS IN ORAL LICHEN PLANUS

Ebtessam El-Zefzaf*, Mona Abd El-Razzak*
Shoukrey Ghoneim** and Nahed Abu Azma**

The distribution of "T" cell subsets (T₄ & T₈) in 10 lesions of oral lichen planus was investigated using an immuno-peroxidase technique. Most of the infiltrating cells consisted of a mixture of T₄ (helper/inducer) and T₈ (suppressor/cytotoxic) cells, presented in the stroma with varied intensity in their distribution. The present study proved that emigration of lymphocytes, through subepithelial vessels, was not selective for the major subsets of T-cells. Subsequent migration of T₈ toward the epithelium was predominant. The present study also support the view that T₈ may have a role in the local destruction of the basement membrane. The immuno-regulatory status between T₄ & T₈ may be responsible for the different clinical forms of lichen-planus.

INTRODUCTION :

Lichen planus (LP) is a common oral disorder which may represent the manifestation of a mucosal reaction to a variety of etiological factors (1). Oral lesions were presented in 70-77% of dermatological patients with LP (2). A recent study on cutaneous LP detected a certain specific antigen (LPSA) in the granular and deep prickle cell layers(3), however, in oral LP, lichen planus, this existence is not present(4). Many investigators suggested the mechanism of basement membrane damage. Some suggested that the loss of blood group ABO substances form the stratum spinosum(5), or the altered expression of fibronectin in the epithelial basal cells, may be the primary factor for its destruction(6).

Histopathological investigations revealed that, most of the mononuclear infiltrates were "T" - lymphocytes bearing (helper/inducer) or (suppressor / cytotoxic) cells (7,8,9). In cutaneous lesions, they demonstrated that

"T₄" cells were predominant (7,10). In oral LP, a predominance of "T₈" cells in the epithelium (9,11) and lamina propria (9) was detected. Some investigators suggested that T₈ may have a role in local destruction of the basement membrane (9,12). Therefore it was desirable to study the distribution of T₄ & T₈ in oral LP.

MATERIALS AND METHODS :

Ten patients with oral lesions of LP were collected from the out-patient clinic of Oral Medicine department, Faculty of Dentistry, Tanta University. Diagnosis was based on both clinical and histopathological findings (Fig. 1&2). All cases fulfilled the criteria recommended by WHO (Oral Surg. 1978, 46 : 518-539). None of the patients had received any medical treatment for oral LP. Most of patients presented the characteristic clinical picture of the reticular form (Fig. 1), Mucosal biopsies were taken under local anaesthesia, fixed in 10% neutral buffered formalin for 12-24 hours, and then embedded in paraffin by the routine process-

* Oral Medicine, Periodontology, Oral Diagnosis Departments Faculty of Dentistry, Tanta University.

** Oral Pathology Departments Faculty of Dentistry, Tanta University.