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EXPRESSION OF KI-67 ANTIGEN IN CYCLOSPORIN A INDUCED GINGIVAL HYPERPLASIA OF RENAL TRANSPLANT PATIENTS

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ABSTRACT

The present study investigates the nuclear proliferating marker ki-67 in cyclosporin A (CSA)-induced gingival hyperplasia of 10 renal transplant patients (GroupI). Other 10 patients with gingival hyperplasia due to local factors (Group II) were included. After through periotherapy and plaque control for 2-3 weeks, tissue specimens were taken from the gingiva of all cases, processed to paraffin sections and stained with H & E and anti-ki-67 antibody using the streptavidin-biotin immunohistochemical technique. The results shwoed that, the staining of ki-67 in the epithelium of the CSA-induced gingival hyperplasia was prominent and localized to the nuclei of basal and variable number of suprabasal cells. In the second group, the positive reaction was mainly in the nuclei of basal cells.

In conclusion, the results suggest that the proliferative activity of the surface epithelium in CSA-induced gingival hyperplasia is more than that of the local factor-induced gingivitis. Therefore, follow-up of the oral tissues in patients under CSA therapy is important to facilitate early diagnosis of any suspicious lesion.

INTRODUCTION

It is well documented that gingival hyperplasia is induced as an adverse effect of certain drugs: anticonvulsant such as phenytoin [1], calcium channel blocking agents such as nifedipine [2], diltiazem [3], velapmil [4], nitrendipine [5], felodipine [6], and oxidipine [7], and immunosuppressants such as cyclosporin A [8].

Cyclosporin A (CSA) is a potent immunosuppressive agent which has revolutionized organ transplant the last decade. Due to its specific effects on the immune system. CSA is now routinely prescribed to prevent graft rejection and it has also been investigated in the treatment of a variety of immunologically based diseases including diabetes mellitus, Behcet's disease, psoriasis, multiple sclerosis, erosive lichen planes and systemic lupus ereythematosus [9]. The success achieved with CSA in transplant medicine and the wide variety of systemic disorders of immunologic origin treated by or potentially treatable by CSA lead to estimates that one billion person worldwide will be taking CSA within the next decade [10,11].

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