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CASE REPORT

LICHEN PLANUS WITH ASSOSIATED SQUAMOUS CELL CARCINOMA IN THE ORAL MUCOSA

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ABSTRACT: Lichen means dry scurfy forms of lower plant life and the same name indicate dry skin disorder like lichen planus. The basic histological feature of lichen planus is basal layer damage and inflammatory reaction in the sub epithelial zone. There are several sub types 0.5% of mucosal lichen planus can become or harbor invasive squamous cell carcinoma.
KEYWORDS: Isolated Lichen Planus oral mucosa, Squamous cell carcinoma in oral mucosa/ vascular hamartoma of oral cavity.

INTRODUCTION: A patient with longstanding oral lichen planus subsequently presented with a raised indurated lesion. The histology of the same revealed squamous cell carcinoma in situ at various places. There are also some selective foci where there was an infiltrative lesion.

CASE HISTORY: A 65years old lady presented with raised plaque like white colored lesion in the buccal mucosa of few years duration. The buccal mucosal biopsy material studied revealed the following features. There was keratinization of the squamous epithelium. The epithelium showed dysplasia of various degrees more pronounced at the basal layer. There was a breech in the basement membrane at various foci. At the site of breech downward growth of squamous cells with formation of tumor cell nests were present.

There was dense inflammatory cell infiltration, predominantly composed of cells of lymphoid series. The lymphocytes tend to form follicles. In the sub mucosal zone, in the area of buccal pad of fat, capillaries and blood vessels of varying dimensions and sizes were present. Most of them were congested. The final histological diagnosis was made as Lichen planus with features of micro invasive squamous cell carcinoma.

HISTOPATHOLOGY: Squamous epithelium showed keratinization and dysplastic changes on basement membrane and mucosa showed dysplastic features with breech in basement membrane. Nodules of squamous tumor cells seen over the sub-mucosa. There was dense inflammatory cell infiltrates deep to the sub-mucosal area and several congested vessels was seen. Nests of squamous eddies surrounded by tumor cells were seen. There was an ulcerated bullae. It contains purulent exudate organized in the supra basilar region and dysplastic cells.

Margins of the bullae where clefting was seen in the sub-corneum (healing process) with collection of dysplastic cells. Artifactual cleft between the epidermis and the lichenoid infiltrate (Max-Joseph space) noticed. Adjacent to the bullae proliferation of squamous cells seen in nests in dermis showed various degrees of dysplastic changes.

Deeper to the lymphoid infiltrate several blood vessels, some of which are dilated and filled with RBC's, few are filled with lymph and few other with thickened wall are observed.

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DIAGNOSIS: Lichen planus with micro-invasive carcinoma along with vascular hamartoma.

DISCUSSION: Lichen planus is sub-acute or chronic dermatoses where flat-topped Shinny, polygonal violaceous papules that often coalesce in to plaques was noticed. They present as an itching lesion. The disease is most commonly well pronounced in the extremities, glans penis and oral mucosa. The oral lesion of lichen planus is noticed in the buccal region and there could be vesicles; sometimes erosion and ulcers are also seen. The hypertrophic variants are observed in the lower limbs; the hypertrophic forms where ulceration are noticed can harbor squamous cell carcinoma.

Rarely there may be a blister and it is designated as lichen planus pemphigoides. The various variants of lichen planus are:

1. Lichen planopilaris.
2. Ulcerative lichen planus.
3. Lichen planus actinicus.
4. Overlays syndrome of lichen planus/ lupus erythematosus.
5. Twenty- Nail dystrophy.
6. Lichen nitidus.
7. Lichen planus pemphigoides.

The characteristic histology of lichen planus is Hyperkeratosis, focal hyper granulation, irregular acanthosis, damage to the basal layer, dense infiltrative in the form of band like, predominantly composed of lymphocytes. The oral lesions vary slightly in histology. There were no other lesions. There is parakeratosis and sometimes hyperkeratosis. Instead of prominent acanthosis, the mucosal epithelium exhibit thinning.

The lesions can undergo ulceration whether due to rupture of the vesicles or due to the necrosis of the epithelium. The development of squamous cell carcinoma is a very uncommon occurrence. 0.5% of oral lesion can harbor malignancy, whereas carcinoma occurring in ulcers of ulcerative lichen planus is higher, which is more commonly seen in the lower extremities.

CONCLUSION: The incidence of squamous cell carcinoma in lichen planus are rarely observed in the extremities. Squamous cell carcinoma originating from the oral lichen planus is approximately 0.5% in most of the series studied. In the present case there is isolated lichen planus in the oral mucosa with associated squamous cell carcinoma and vascular hamartoma.

EQUIPMENT USED:

Nikon coolpix-8400.
x-denotes the power of objective.
Stain used – (H & E).

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MICROSCOPIC PICTURE

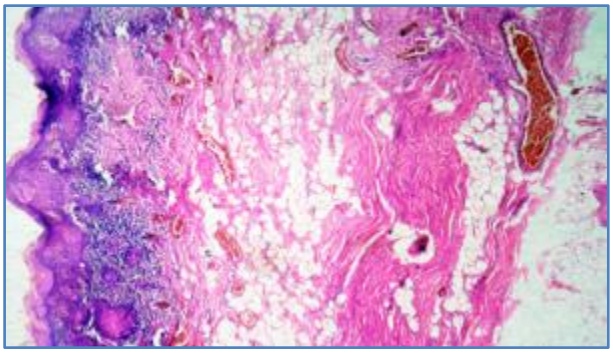

Fig. 1: (H & E x4)

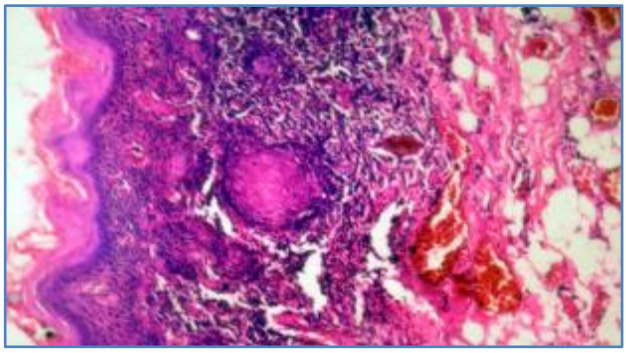

Fig. 2: (H & E x10)

Fig. 1 and Fig. 2: Squamous epithelium with dysplastic changes and nodules of squamous tumor cells. Deeper to the infiltrate several congested blood vessels are present. Artifactual cleft between the epidermis and the lichenoid infiltrate (Max-Joseph space)

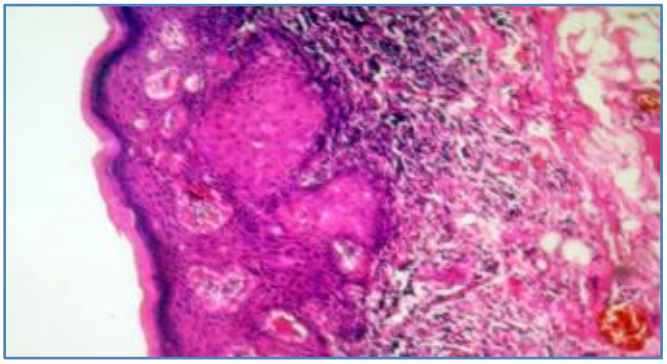

Fig. 3: (H & E x10)

Breech in basement membrane with dysplastic features in mucosa

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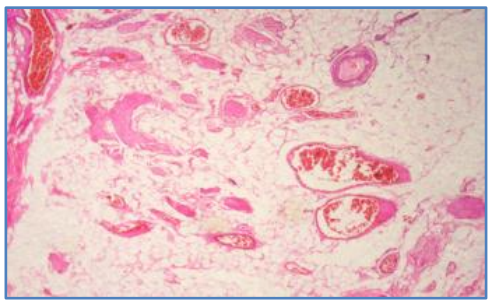

Fig. 4: (H & E x10)

Several blood vessels in the buccal pad of fat, some are filled with RBC's and occasional one filled with cells of lymphoid series and one showed thickened wall.

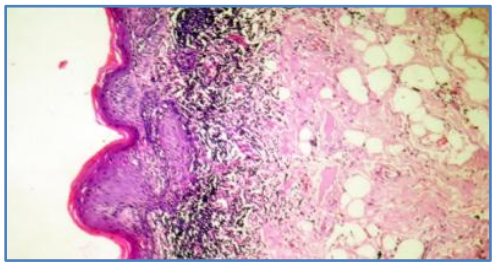

Fig. 5: (H & E x10)

Foci of invasion in submucosa and lymphocyte aggregates forming follicles

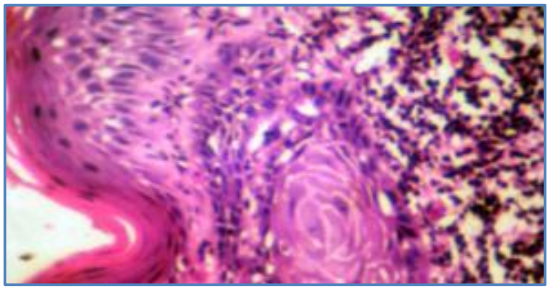

Fig. 6: (H & E x40)

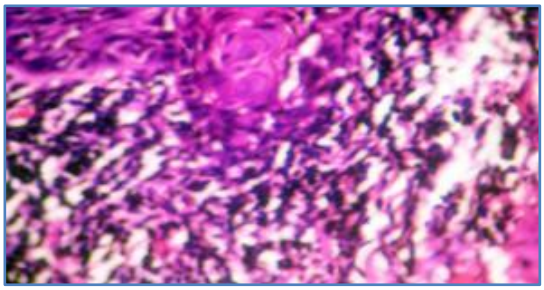

Fig. 7: (H & E x40)

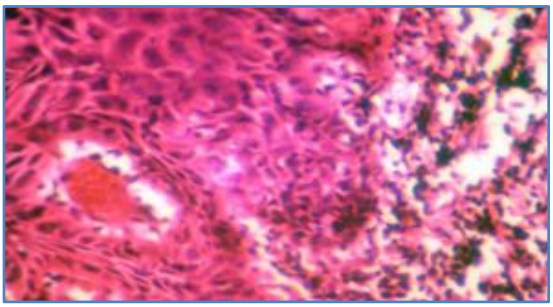

Fig. 8: (H & E x40)

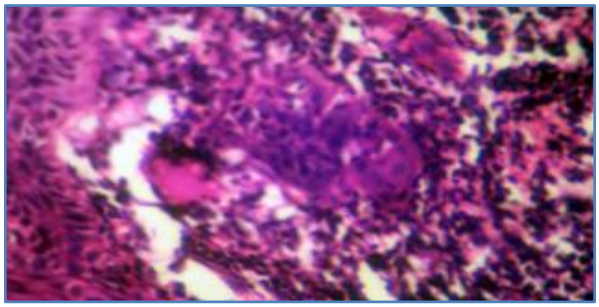

Fig. 9: (H & E x40)

Fig. (6-9) Mucous membrane breech with squamous dysplastic cells.

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