

Histomorphometric comparison of gingival epithelium in smokers, former smokers and non smokers

Deepika Bandarupalli BDS, MDS
Mamata Dental College, Telangana, India



INTRODUCTION

Gingival epithelium is a constantly self renewing tissue. Tobacco use is associated with periodontal disease, the severity of diseased sites increasing with extent and duration of exposure. Smokers have decreased clinical signs i.e., tissue redness, edema bleeding on probing compared to non- smokers.

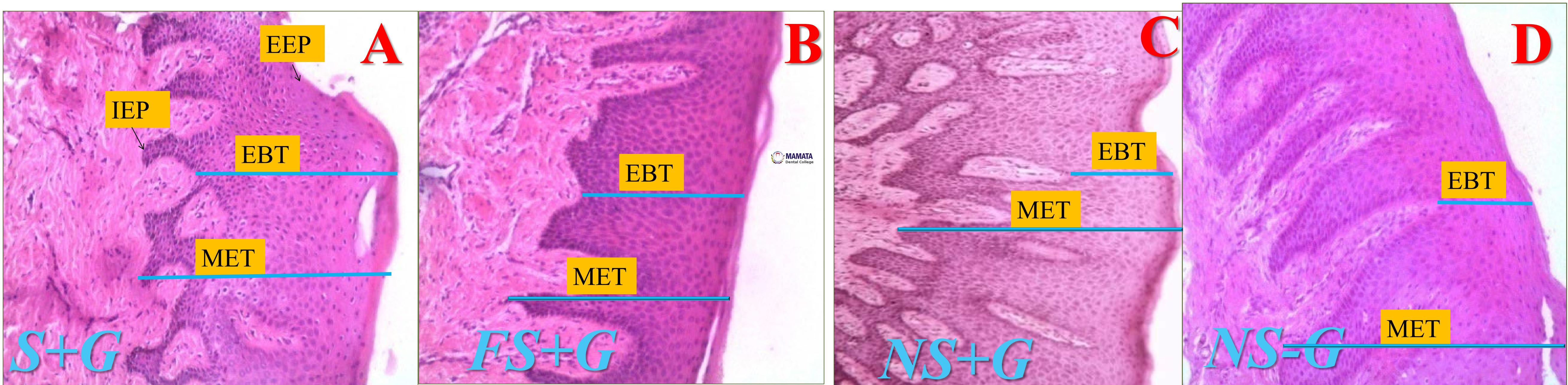
Aim :- to evaluate & compare the gingival epithelial changes in smokers, former smokers & non smokers

METHODS & MATERIAL



Methodology:- 20 patients were selected & divided in to 4 groups.

Tissue Preparation: Gingival biopsies were histologically processed & viewed for changes in epithelium thickness under a light microscope at magnification 10X.



CLINICAL PARAMETERS

1. External epithelial perimeter (EEP)
2. Internal epithelial perimeter (IEP)
3. Epithelial base thickness (EBT) - distance between external epithelial surface and basement membrane located between the two cristae.
4. Major epithelial thickness (MET) - distance between external epithelial surface and the epithelial crista tip.

RESULTS

EEP : A>B>C>D
IEP : A,D>B>C
EBT : A>D>B,C
MET : D>A>B,C

- Increased thickness of keratinized layer & stratum spinosum in smokers.
- Exuberant stratum corneum in smokers & former smokers with gingivitis.
- Frequent increased epithelial projections during gingival inflammation.

DISCUSSION & CONCLUSION

- Increase in local temperatures and byproduct from tobacco oxidation induce an increase in oral mucosa and in the oral gingival epithelium thickness.
- There is reduction of inflammatory clinical signs in the gingival tissue which can be attributed to increase in thickness of gingival epithelium. According to the present study there is decrease in EBT in former smokers compared to smokers indicating the positive impact on smoking cessation.