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Role of glycogen in the disease activity of early onset periodontitis

The present study was undertaken to demonstrate the glycogen content in the gingival tissue of patients with early onset periodontitis, and its role in the activity of the disease.

30 patients were selected for this study, they were classified according to the criteria of Pag et al (1983)into:

- 10 PP patients.
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And 10 healthy control subjected were included in the study for comparison.

Gingival biopsies were taken from all the subjects and processed for the following investigations:

- Histological study using H&E stain for morphologic evaluation.
- Histological study using PAS stain for glycogen demonstration.
- Ultra structural study.

The study revealed the following results and conclusions:

*In the PP patients, there was an increase of both the glycogen content and the degree of keratinisation which may be due to severe acceleration of the self-defence mechanism of the body to increase the production of glycogen and keratin as a sort of compensation for the compromised immune function.

*In JP patients, there was a slight decrease of the glycogen content which accompanied with moderate degree of keratinisation that is due to the normal function of glycogen to be displayed giving the energy necessary for keratin formation and hence decreasing the amount of tissue destruction.

*In RPP patients, there was an absence of glycogen in all the epithelial cells accompanied with impairment of keratinisation which is mainly due to severe defective immune mechanisms that might affect the normal functions of the cells and this in turn may help in the massive tissue destruction which occurs in RPP.