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*"Nucleic acids(RNA,DNA)in the gingival tissue of patients with rheumatoid*

*arthritis(clinical ,histological and histochemical study"*

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**NUCLEIC ACIDS (RNA, DNA) IN THE GINGIVAL  
TISSUE OF PATIENTS WITH RHEUMATOID  
ARTHRITIS (CLINICAL, HISTOLOGICAL AND  
HISTOCHEMICAL STUDY)**

The present study was carried out to demonstrate the nucleic acids (DNA, RNA) and evaluate their activity in the gingival tissue of rheumatoid arthritis (RA) Patients.

Two groups of individuals were selected:

-30 patients with RA (20 sero+ve and 10 sero-ve )

-Ten healthy subjects matched for age and sex as RA group, used as control.

All subjects were examined clinically for:

Plaque index, gingival index, pocket depth, loss of fiber attachment and alveolar bone loss scores.

Gingival biopsies were taken from all the subjects and were manipulated to be examined histologically and histochemically for nucleic acids.

Clinical results showed no significant difference in the plaque index between RA and the control group, while significant increase in gingival inflammation , pocket depth, loss of fiber attachment and alveolar bone scores were seen in RA groups.

Histological results revealed that in RA there was an impaired keratinization, increased epithelial hyperplasia, increased hydropic degeneration and intense collagen breakdown.

Histochemical results showed an increased activity of DNA in basal and suprabasal epithelial cells, while decreased activity of RNA in the superficial epithelial cells was observed. Also the fibroblasts showed much decrease of RNA in their cytoplasm although an intense activity was observed in their nuclei.

From the results of the present study, we can conclude that:

-RA patients have marked periodontal destruction.

-There is inhibition of protein synthesis and cell renewal in RA, which can give a possible explanation for the collagen degeneration in such systemic disease.

-Both rheumatoid group (sero+ve and sero-ve) share nearly in the same histochemical alternations in the nucleic acids in the gingival tissue. This similarity helps in the detection of the rheumatoid disease in sero-ve patients which is impossible through blood investigation.

-Also these histochemical alterations in the nucleic acids provide an early diagnosis of the disease in the initial sero-ve stage as well as a confirmation of the disease in the sero-ve patients that last over one year.