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*"Tissue respiration in rapidly progressive periodontitis"*

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### **TISSUE RESPIRATION IN RAPIDLY PROGRESSIVE PERIODONTITIS(RPP)**

The present work was conducted to study and evaluate the endogenous tissue respiration in patients with RPP who were selected according to the criteria of Page et al 1983, and 10 healthy control subjects were included for comparison.

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

- 1)Histological and histochemical study for succinic dehydrogenase activity.
- 2)Physiological study of the Oxygen consumption of the gingival tissue.
- 3)Ultra structure study for revealing mitochondrial activity.

The study revealed the following results and conclusions:

- \*The signs of degenerative changes observed in RPP reflected and explained the massive tissue destruction associated with this disease entity.
- \*Ultra structural changes of the mitochondria of the gingival tissue included deterioration being mainly due to the degenerative changes that takes place in RPP and also due to the harmful injury under the influence of impaired immune function with the resultant increased virulency of the microorganisms.
- \*Low oxygen consumption and decrease activity of the succinic dehydrogenase enzyme was observed in RPP patients which was mainly due to affection of the mitochondria.
- \*The decrease in the endogenous tissue respiration in the gingival tissue of RPP patients may add much tissue destruction. So, the patients should seek for rapid treatment to avoid as much as possible the harmful sequences that lead to mitochondrial affection.