

EXPERIMENT WITH THE L.L.L.T IN IMPLANTOLOGY

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INTRODUCTION

With the introduction of the Laser in dentistry new horizons were opened . The well known Lesers systems used in denstry are :CO2 leser,Nd:Yag leser , Ar.leser.The low power HE-NE and diode Laser (soft leser)are mainly used in hiostimulation . This laser type was the one used in the present experiment.

Materials end methods

The first purpose of this study was to verify if the LLLT does not harm or modify in any way the materials used , such as Titanium TPS, HA, HTR, ect..

Optical and electro-microscopic investigations(SEM,END)of the materials before and after irradiation turned in the solid mass .Thus Ti. TPS ,HTR rectangular blocks remained unchanged.

The second objective was the histological study .For the study were selected 8 dogs , all in good systemic conditions. Both upper and lower right bicuspid were extracted in all dogs.A period of one month for healing , was permitted.The 8 dogs were divided in four groups(ABCD) two in each group.

The different groups were treated as follow:

- Group A-implanted insert
- Group B- implanted insert and radated by LLLT** ray.
- Group C –implant site widened for placement of the synthetic bone *** plus implant.
- Group D – implant site widened for placement of synthetic bone ***plus implant and radiated with LLLT**.

After one month the dogs were sacrificed , then the histological examinations were performed

RESULTS

Of the group that was not irradiated with LLLT , inflammatory cellular infiltration and direct bone implant interface were found.

No sign of inflammatory reaction were found in the group treated with LLLT.

Although no fibrosis will occur in such cases, direct bone implant interference remains. reaction were found in the groups treated with LLLT.

DISCUSSION

In conclusion ,taking in account all the experiments as awhole ,we speak about a quicker integration of the implants, new formation of bone , integration of synthetic bone with the natural bone , and at the same time a quicker epithelialization as a result of the correct use of LLLT.