Міністерство освіти і науки України Сумський державний університет Наукове товариство студентів, аспірантів, докторантів і молодих вчених СумДУ

## ПЕРШИЙ КРОК У НАУКУ

Матеріали VIII студентської конференції (Суми, 11 грудня 2016 року)



Суми Сумський державний університет 2016

## USING LASERS IN DENTISTRY

Москаленко І., студент; СумДУ, гр. СМ-502

Dentists began to use lasers in 1989 in different spheres of their work. Today they use lasers in order to treat periodontal disease, tooth decay, lesion removal. Besides, lasers can be used for teeth whitening.

Laser-assisted new attachment procedure (LANAP) — uses lasers to evaporate and transfer damaged tissue from the mouth. The first step of this procedure — the heat of laser strips away the diseased surface. After that, the laser lights to heat the area. As a result — dentists form a clot, which is cauterizing the diseased surface.

Researchers from the American Academy of Periodontology prove that using lasers as an addition to scaling and root planning may improve the effectiveness of periodontal therapy. When lasers are used, the patient feels less swelling and bleeding during surgery procedure.

Every laser has different levels of power and lengths of wave. Dentists use appropriate lasers in their numerous periodontal procedures. Unfortunately, periodontal tissues can be damaged by laser with inappropriate levels of power and lengths of wave during a surgery procedure.

LANAP can be used to prepare teeth for treatment: fillings or crowns. Laser removes the decayed part of a tooth, gum tissue infection and reshapes it.

LANAP can provide painlessly and safely attachments of connective tissue. The epithelium which is between the membranes and connecting tissue is damaged. LANAP can restore the fibers of periodontal ligament. These fibers join the cementum with the alveolar bone.

There are some advantages of using lasers in treating gum diseases: stop bleeding of the gums immediately; close deep periodontal pockets; stop cutting the gums and soreness caused by surgery; reduce loose teeth; regenerate bone and ligament tissue.

Lasers provide a painless procedure for killing harmful bacteria of oral cavity, allow dentists to protect teeth from falling out, and relieve the pain and inflammation.

Керівник: Нефедченко О.І., викладач

Секція «Біофізика»