Staphylococcus D vaccine, used in the treatment for periodontal disease, produced by the National Institute of Development in Microbiology and Immunology Cantacuzino - Romania

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Abstract

Modulating the immune response with staphylococcus vaccine (SVD) in the periodontal disease.

A new method of periodontal treatment by modulating the immune response with SVD associated with polyvaccine (Polidin) and antibiotics together with conventional treatment. Staph vaccine produced by Romanian Cantacuzino Institute in 1927. First generation vaccine was originally used only for treating chronic recurrent staphylococcal infections.

Since 1997, Cantacuzino Institute introduced staph vaccine in D classification (vaccine kit used in diet for treating periodontal disease).

SVD vaccine is prepared by Dr. Pasteur in 1892 and used for treating staphylococcus infection, but gradually abandoned since the appearance of the antibiotics. Since 1985 hypothesis of staphylococcus involvement in periodontal disease and its right treatment by Staph vaccine, have been checked out.

Background

Staphylococcus bacteria attach to oral cavity flora, as saprophyte and opportunistic - pathogenic determined, even ubiquitous ancient bacteria that parasites all living organisms passing from human to animal and vice versa, with great adapting capacity and becoming immune to its antibiotics (aerobic and anaerobic, anaerobic).

Currently there is a pandemic of methicillin resistant staphylococcus. Panton infections with Staphylococcus appear most commonly in the medical practice (70-80% out of suppuration) and it is the agent in more than 90% of ostetes and osteomyelitis cases. Staphylococcus is high criticality and a pathogenic microorganism. Bacteriological tests conducted by Cantacuzino Institute revealed a considerable proportion (45%) of staphylococcus in periodontal pockets, on a 300 subjects study and 802 bacteriological identifications by selective breeding (Chapman method) that a new scheme of Staph vaccine has reduced periodontal inflammation.

Methods

1. Preparation of SVD in one billion decimal dilutions, 1/10, 1/100, 1/1000, bacterial/ml with therapeutic indication for regeneration of the gingival margins.

2. The bacterial strains used in the preparation of the vaccine: Staphylococcus capitis, Staphylococcus epi, Staphylococcus aureus, Bacteroides fragilis, Bifidobacterium sp., Fusobacterium mortiferum.

3. The treatment is performed together with conventional therapy: antibiotherapy, gum surgery, descale, root polishing.

4. The vaccine therapy is applied along with conventional periodontal treatments as hygiene, scaling, cleaning, surgery, occlusal therapy etc.

5. After the treatment: pink, healthy gum, reduced pockets depth, reduced or no more inflammation, normal texture of gum.

Results

The quantity of bacteria is reduced in 6 months after first immunodiffusion cycle, reimmunization is required in 6 months, 1 year and 2 years at the end of each cycle, consisting of 9-10 inoculations of successive dilutions of ½ and 1/ vial. If the results are unsatisfactory, a new scheme of Staph vaccine is used.

Pilot sample – evolution: (vaccine) - 57% - favorable (placebo) - 7% - favorable (placebo).

Before treatment:

- gum ulcers
- bleeding, plaque, tartar, pockets up to 8-10 mm,
- clinical signs - gum ulcerations, inflammation,
- mobility up to grade 3, gingival retraction.

5. Before treatment, ulcerative necrotic periodontitis, plaque, tartar, pockets up to 10 mm, mobility up to grade 5.

After treatment:

- many papilla profiling, biophytes with epithelial integrity, non-union joint-vascular axis with a free biophytes, which usually occur in a tremendous proliferation of fibrous generation and keratinization-Col HE 400

6. Before treatment, neof ormation vessels mucosocutaneous leukocid inflammation, granulation tissue in the chon, COL HE 100

After therapy, the epitheliun with (Staphylococcal) normal epidermis layer with desmorrhol (intrabacterial) in the surface layer of the observed granulation tissue. Epithelial cell regeneration and chon- Col HE 400

After treatment:

- epithelial regeneration and microsurgicalseparation of granulation tissue into fibrous generation

- chronic granulomatous infections in oral cavity, increased tissue proliferation among groups of connective fibers papillomatosism, absence of microbial or granulomatous tissue, no more microbial or granulomatous tissue.

After treatment:

- gingival histological exam

CONCLUSION

1. Staphylococcus is present in a significant proportion of subjects (45%) of periodontal pockets of purulent exudation.

2. Immunotheraphy with staph vaccine, administered by proposed inoculation scheme is effective to reduce inflammation and the symptoms of periodontal disease, curing and regenerating periodontal structures, controlling the chronic proliferation of bacteria, decreasing frequency of chronic inflammatory infiltration processes.

3. Immunomodulating effect of the proposed method depends on general reactivity of patient and periodontal disease needs to be treated together with improvement of his health status (somatic health).

4. Before treatment staph vaccine should be infused to a thorough consultation carried out by GP or specialist and correct treatment of identified pathology.

5. Staph vaccine immunotherapy is effective, operative, low-cost, well tolerated by the patient, successfully completing the usual therapeutic procedures.

REFERENCES


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6. In the chorin: numerous reticulin fiber proliferation among groups of connective fibers papillomatosism, absence of microbial or granulomatous tissue, no more microbial or granulomatous tissue.

7. In the chorion: numerous reticulin fiber proliferation among groups of connective fibers papillomatosism, absence of microbial or granulomatous tissue, no more microbial or granulomatous tissue.

8. After treatment, the epitheliun with (Staphylococcal) normal epidermis layer with desmorrhol (intrabacterial) in the surface layer of the observed granulation tissue. Epithelial cell regeneration and chon- Col HE 400


11. Conclusions

12. After treatment: complete restoration of connective tissues, absence of microbial or granulomatous tissue.