

ADVANTAGES OF CAPTEK LABORATORY TECHNOLOGY

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ABSTRACT:

After the introduction of vacuum firing of dental porcelain (1940) and especially after the realization of the connection metal – porcelain (S. Brecker, 1956), the metal-ceramic restorations gradually turned into a standard for aesthetic restorations. The dentists' aspiration for satisfying the increasingly raising aesthetic and functional demands of the patients led to the development of new laboratory technologies. Captek is unique in its nature technology for producing of metal-ceramic restorations. Ceramic is laid over a gold-platinum-palladium frame, that is not cast.

Key words: Captek, gingival health

PURPOSE:

The aim of this article is to introduce to the dentists and the dental technicians the advantages of this revolutionary technology in its clinical and laboratory aspect.

METHODS AND MATERIALS:

Captek technology for producing of metal-ceramic restorations. Clinical case of a 45-years old patient with 8 single crowns Captek (14 – 24). The patient is anamnestic for allergy to base alloys and for chronic plaque-induced periodontitis. She is with high aesthetic expectations about the impending treatment.

DISCUSSIONS:

It is a rule today that the highest aesthetic indices are received after non-metallic restoration. As leaders among the pure ceramics are given: E-MAX IVOCLAR, VITA VM-7, VITA-VM-9, PENTRON's OPTEC 3G. The unreasonable cost price and the much lower mechanical properties, comparing to the metal-ceramic restorations, led to the development of alternative technologies for highly aesthetic restorations. These are all metal-ceramics with noble alloys and the galvanoceramics. I. Shoher and A. Whiteman published in 1995 the results of their long-lived researches along these lines. Captek technology appeared. They called their technology "reinforced gold" and "composite metal". Each component of Captek's frame contains 88.2 % gold, 9.0 % platinum and palladium and 2.8 % silver. In the beginning the technology was recommended for single

crowns, inlays, overlays and three-unit bridge restorations. Today can be produced bridge restorations with 2 missing teeth. The nature of Captek technology is that over a hard plaster stump is plastified with a modeling instrument and then under vacuum the first layer of a platinum-palladium material. After it is baked in the oven, a second layer is on. It is also baked and then the ceramics is laid. From the laboratory point of view, the absence of casting saves a lot of time and resources, and the machining is minimum in practice. The clinical researches of Goodson JM and Shoher I in 2001 proved the enormous reduction of the bacterial plaque around the Captek restorations. Our clinical findings are analogous.

RESULTS:

The patient's restorations correspond exactly to all aesthetic, functional and prophylactic demands. The improvement of the gingival health is particularly significant.



Fig. 1. Clinical view before treatment.



Fig. 2. Extraoral view.



Fig. 3. The caps, before the ceramics is laid.



Fig. 4. The caps during the try in mouth.



Fig. 5, 6. Final view of the crowns in the laboratory.



Fig. 7. Clinical view after treatment

CONCLUSIONS:

The use of Captex restorations is recommended at patients with higher aesthetic demands, tendency to plaque accumulation, anamnesis for allergy and in every other case of contemporary dental medicine.

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