

Mogućnosti uporabe vlaknima ojačanih kompozita u implantološkoj terapiji

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Vlaknima ojačani kompoziti (engl. fiber reinforced composites, FRC) posebna su skupina materijala sastavljena od kompozita u koji je uložena određena vrsta vlakana. Vlakna se razlikuju po kemijskom sastavu i po načinu izradbe. S obzirom na kemijski sastav, danas se u restaurativnoj i estetskoj stomatologiji najčešće rabe polietilenska i staklena vlakna (osim te dvije vrste mogu se naći ugljična i kevlar vlakna). Prema načinu izradbe vlakna mogu biti istosmjerna ili pletena. Pletena vlakna međusobno se razlikuju po veličini i načinu pletenja. Uporaba vlakana u svakodnevnom kliničkom radu posljednjih godina sve više dobiva na važnosti. Svoju uporabu našla su u gotovo svim dijelovima stomatološke struke: parodontologiji, restaurativnoj stomatologiji, traumatologiji, ortodontici, itd. Vlakna mogu biti izrađena u dva osnovna oblika: preimpregnirana i neimpregnirana. Preimpregnirana vlakna u posebnom su načinu pakiranja i već obložena kompozitnom osnovom, a kod neimpregniranih vlakana potrebna je predpriprema prije ulaganja u kompozitni materijal.

Uporaba vlaknima ojačanih kompozita otvorila je nove mogućnosti u rješavanju određenih problema koji mogu nastati tijekom implantološkoprotetske terapije. Cilj je predavanja prikazati mogućnosti upotrebe vlaknima ojačanih kompozita u različitim kliničkim slučajevima te uputiti na pogreške tijekom kliničke izradbe.

Possibilities of the Application of Fibre Reinforced Composites in Implantological Therapy

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Fibre reinforced composites (FRC) are a specific group of materials consisting of composites in which determined types of fibre are inserted. The fibres differ according to their chemical composition and method of construction. With regard to the chemical composition, polyethylene and glass fibres are most frequently used today in restorative and aesthetic dentistry (apart from these two types, carbon and kevlar fibre can be found). According to the method of construction the fibres can be parallel or plaited. Plaited fibres differ mutually with regard to the size and method of plaiting. In the last few years application of fibres in daily clinical work has become increasingly important. Their application has been found in almost all areas of the dental profession: periodontology, restorative dental medicine, traumatology, orthodontics, etc. The fibres can be constructed in two basic forms: impregnated and unimpregnated. Impregnated fibres are packed in a special way and already coated with the composite base, while in the case of unimpregnated fibres prior preparation is necessary before insertion in the composite material. The application of fibre reinforced composites has opened up new possibilities in the treatment of specific problems which can occur during implantological-prosthetic therapy. The purpose of the lecture is to show the possibilities of the application of fibre reinforced composites in different clinical cases and to describe possible errors during clinical construction.