

site of the implant-abutment interface from the outer top margin to the center of the implant shoulder, enabling the establishment of a biological width that is perpendicular to the long axis of the implant. The height of the marginal osseous crest (crestal bone) is maintained at the coronal top of the implant shoulder- it plays a decisive role in the formation and long term maintenance of papillas. Additionally, the platform switched design facilitates the mounting of submucosal placed abutments, preventing impaction of soft tissue between the implant-abutment interface. Both the high strength and initial small diameter of the abutment make it possible to obtain: (1) excellent aesthetics and (2) suprastructures that are clinically very similar to tooth borne prostheses.

## Kirurški aspekti rješavanja estetskih problema usadcima i kronicama kada nedostaje samo jedan prednji zub - utjecaj promjera usatka na crveno-bijelu estetiku

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Estetski rezultati nadomještanja prednjih zuba, napose u gornjoj čeljusti, jedno su od najtežih implantoloških pitanja. Postoje, međutim, brojni preimplantacijski pokazatelji koje treba dijagnosticirati prije izvođenja kirurškog zahvata, tako da se rezultat lako može predvidjeti. Među njih se ubrajaju vrsta gingive, količina horizontalne i vertikalne kosti itd. Kliničko nam je iskustvo pokazalo da implantaciju bez augmentacije u mladih osoba, koja se izvodi samo zbog estetike, ne i zbog funkcije, ne treba više izvoditi. Cilj nam je prikazati nekoliko različitih vrsta augmentacije, više u tvrdim (širenje kosti, autologno i alogensko) negoli u mekim tkivima (FTG) i pokazati da se rezultati, na zadovoljstvo pacijenata, mogu predvidjeti. Prednosti nekih susta-

va omogućavaju postavljanje usatka malog promjera i postizanje izgleda kao da je izrastao iz kosti, te bez problema s gubitkom vestibularne kosti.

Izazov implantologiji predstavlja nadomještanje sjekutića i očnjaka na način da se postigne predvidiv estetski rezultat koji će dugo trajati. Osim o multidisciplinarnoj suradnji između oralnih kirurga, protetičara i zubotehničara, rezultat ovisi i o dobrom izgledu krunica na implantatu, s dobrim spojem s tkivom, koji treba izgledati kao da je izrastao iz kosti. Jasno je da za nadomještanje gornjih središnjih sjekutića i očnjaka treba odabrati platformu usatka većeg promjera. Međutim, pregledom podataka objavljenih u literaturi i teoretskih razmatranja koja se odnose na najolik oblik tijela konvencionalnih mostova, kao i mnogih slučajeva, dolazi se do zaključka da izgled kao da je izrastao iz kosti ne ovisi o promjeru postavljenog usatka. Taj je izgled zadan isključivo oblikom krunice na usatku.

Stoga se usadci malog promjera mogu koristiti ako postoji manja količina kosti, no to onemogućava da se brojnim suvremenim kirurškim postupcima poveća količina kosti u vestibularno-oralnoj dimenziji.

## Surgical Considerations for Aesthetic Problems with Implants and Crowns for Single Missing Front Teeth - the Influence of the Implant Diameter on the Red - White Aesthetics

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The aesthetic result in anterior areas, especially in the upper jaw, is one of the most difficult implantological questions. However there are many preimplantological parameters, which can be diagnosed before surgery, so that it is easily possible to get a

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predictable result. Some of them are the type of gingiva, horizontal and vertical bone quantity etc. Our clinical experience has demonstrated that implantation in younger people without augmentation, when necessary only for aesthetics and not for function, should no longer be tolerated.

Our aim is to present different types of augmentation in hard (bone spreading, autologous and allogenic) and in soft tissue (FTG) and to show the predictable results with satisfied patients. Some system advantages allow us to insert low diameter implants with very good emergence profile and no problem with vestibular bone loss.

A challenge in implantology is the predictable, long-term aesthetics result, replacing incisors and canines of the upper jaw. Besides multidisciplinary

cooperation between oral surgeons, prosthodontists and dental technicians the results depends on the correct emergence profile of implant borne crowns. A wide diameter implant platform should be chosen in case of replacing upper central incisors or canines. However, an analysis of the literature, theoretical considerations regarding ovate shaped pontics of conventional bridges, and many cases, lead to the conclusion that the emergence profile is independent of the used implant diameter. The profile is exclusively defined by the shape of the implant borne crown.

Therefore, small implant diameters can be used if there is less bone amount, preventing many advanced surgical procedures to improve the bone amount in the oral-vestibular dimension.