

with special autografts and 14.8% with combinations of grafting materials. 62 complications involving 77 implants were subsumized in 6 different groups and 3 degrees of severity. There were 31 sites with implant failures. 4 buccal implants exposures. 15 dehiscences of oral mucosa with and without loss of augmentation material or membrane/implant exposure. 3 acute po. Infections. 9 considerable reductions of augmentation volume and 2 cases of acute late sinusitis with empyema. This means a complication rate of 15.6%. In 34 (8.6%) cases the treatment plan was not affected. 20 (5%) made necessary modification of the treatment plan and in just 8 cases (2% of all) implant supported prostheses could not be achieved.

Despite a relatively high incidence of postoperative complications the treatment objective of implant-supported rehabilitation of the posterior maxilla could be achieved in 97.2%, including changes of the treatment plan in 8.2%. Within the limits of a retrospective study the present investigation showed implants placed in combination with sinus augmentation functioned successfully during an observation period of 10 years.

## Djelotvornost protetike s mehanički čvrstim implantacijskim sustavima s platformom

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Presudno obilježje današnjeg dvodijelnog implantacijskog sustava je mehanički čvrsta, pouzdana površina usatka koja će biti u dodiru s kosti. Tom se zahtjevu može na optimalan način udovoljiti precizno izrađenim spojem s nosačem konusnog oblika (Morseov konus). Taj je spoj s nosačem konusnog oblika vrlo otporan na savijanje i torziju pri obavljanju kliničke funkcije, čime se znatno smanjuje mogućnost kidanja vijaka ili njihova labavljenja. Uz to, spoj s nosačem konusnog oblika omogućava i izradu oblika platforme na koronalnom dijelu usatka. Time se omogućava stvaranje debelog sloja gustog, mekog tkiva oko vrata nosača i

prekrivanje preostalog, horizontalnog dijela platforme. Tim se debelim slojem tkiva prikriva boja titana na cervicalnom dijelu fiksne proteze i omogućava da taj dio poprimi boju normalnog tkiva. Takav oblik usatka s platformom također omogućava da se mjesto kontakta implantat-nosač s vanjskog gornjeg ruba pomakne prema središtu ramena implantata, čime se dobiva biološka širina u smjeru okomitom na uzdužnu os implantata. Tako se održava visina rubnog koštanog grebena (grebenska kost) na koronalnom vrhu ramena implantata - što ima presudnu ulogu u stvaranju i dugoročnom održavanju papila. Uz to, oblik implantata s platformom olakšava postavljanje nosača u submukozu i sprječava utiskivanje mekog tkiva u područje kontakta između usatka i nosača. Velika čvrstoća i inicijalno mali promjer nosača omogućavaju postizanje: (1) izvrsne estetike i (2) suprastruktura koje su klinički vrlo slične zubu koji je u mostu.

## Effectiveness in Prosthodontics with Mechanically Strong, Platform Switched Implant Systems

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A decisive feature of the two-piece implant system of today is a mechanically strong, reliable implant abutment interface. This demand can be optimally achieved by a precisely machined, tapered-cone abutment (Morse taper) connection. This tapered abutment connection provides high resistance to bending and rotational torque during clinical function which significantly reduces the possibilities of screw fracture or loosening. Additionally, tapered abutment connection causes a platform switched design at the coronal portion of the implant. It enables a thick layer of dense soft tissue to form around the neck of the abutment and cover the remaining horizontal area of the platform. This thick tissue masks the colour of the titanium that is cervical to the fixed prosthesis and is responsible for normal tissue colour. This platform switched implant design also moves the