Dentists in the know use Septodont Needles

The UK's leading supplier of dental anaesthetic, Septodont, already bring you the high quality Septoject and Septoject XL needles and would now like to introduce a new development to Ultra Safety Plus.

Ultra Safety Plus syringe is a sterile, disposable and self aspirating syringe system with a pre-mounted needle. Its use means needle stick injuries can be virtually eliminated. With the option of a NEW single use handle (non sterile), Ultra Safety Plus is now 100% disposable.

For more information please handle (non sterile), Ultra Safety Plus. The option of a NEW single use handle (non sterile), Ultra Safety Plus is now 100% disposable.

Back to the Egg; Part II
Kenneth Serota continues his look at the Endodontic Implant Algorithm

Dentin is the most abundant mineralised tissue in the human tooth. In spite of this importance, over half a century of research has failed to provide consistent values of dentin's mechanical properties. In clinical dentistry, knowledge of these properties is pivotal to any number of variables ranging from innovations in preparation design to the choice of bonding materials and methods.

The Young's modulus (the measure of the stiffness of an isotropic elastic material) and the shear modulus (modulus of rigidity) are diminished by viscoelastic behaviour (time-dependent stress relaxation) at strain rates of physiologic (functional) relevance. The reported tensile strength data suggests that failure initiates at flaws. These flaws may be intrinsic, perhaps regions of altered mineralisation, upon tooth strength as a function of these altered forms of dentin is not well understood.

The long-term predictability of residual coronal tooth structure to function in a manner commensurate with the demands of the orofacial ecosysten, may need to be reassessed in light of observations that sclerotic dentin, unlike normal dentin, exhibits no yielding before failure and that the fatigue lifetime is deleteriously affected at high stress levels (19). Mechanisms for energy dissipation and crack growth resistance present in young dentin are not present in old dentin. Restorative methods and techniques, particularly as it relates to ferrule creation for endodontically treated teeth, may need to be amplified to address the fact that fatigue crack growth resistance of dentin decreases with age (20) (Fig 5).

There are primary causes that predispose teeth to fracture and secondary causes that predispose fracture after a period of time (Fig 5). Endodontics is a component of an interdisciplinary process and a chain is only as strong as its weakest link.

Subsequent to any endodontic procedure, intensity of stress concentration and tensile stresses within an endodontically treated tooth will depend upon (i) the material properties of the crown, post, and core material chosen, (ii) the shape of the post, (iii) the adhesive strength at the crown–tooth, core–tooth, and core–post, post–tooth interfaces, (iv) the magnitude and direction of occlusal loads, (v) the amount of available tooth structure and (vi) the anatomy of the tooth. Any combination of vectoried stress concentration and high tensile stresses will predispose these teeth to fracture without an adequately engineered restorative design.

Reengineering
Reengineering negative treatment outcomes is a significant part of the contemporary endodontic oeuvre. The presence of apical periodontitis may or may not affect the outcome of initial endodontic treatment (25) however, there is a general consensus that apical periodontitis...
Sensodyne Rapid Relief – rapid* and long-lasting** relief from the pain of dentine hypersensitivity1,2

The strontium acetate formulation of Sensodyne Rapid Relief forms a deep occlusive plug within the dentinal tubules3,4 providing:

- Clinically proven relief.1,2
- Works in 60 seconds*1
- Proven long-lasting relief with twice daily brushing1
- A deep, acid-resistant occlusion3,4
- Fluoride to strengthen tooth enamel

The robust occlusion formed by Sensodyne Rapid Relief is still maintained after an acid challenge4

In vitro study of dentinal tubule patency following an acid challenge (immersion in grapefruit juice, pH 3.3) applied after dabbing and massaging for one minute with Sensodyne Rapid Relief. Adapted from2.

Unoccluded dentine | After treatment and a 30 second acid challenge | After treatment and a 10 minute acid challenge
---|---|---

Unoccluded dentine | After treatment and a 30 second acid challenge | After treatment and a 10 minute acid challenge

Recommend Sensodyne Rapid Relief for rapid relief from the pain of dentine hypersensitivity

* when directly applied with finger tip for one minute ** when used twice daily

SENSODYNE and THE RINGS DEVICE are registered trade marks of the GlaxoSmithKline group of companies.

Dental Tribune - August 2-8, 2010

The real alternative to rigid partials and bridges

The Valplast Alternative

• No tooth prep required
• Thin cross-section
• Metal and Acrylic free
• CE Marked
• Valid Statement of Conformity

- less chair side time
- Totally Non-Invasive
- More patient affordable
- More aesthetically pleasing
- Hypoallergenic

Lifetime guarantee against breakage of the base material in normal use
The patient guaranteed with every genuine Valplast® Flexible Appliance is your guarantee of quality
On-line patient Guarantee Registration

FDC Flexible Denture Cleaner with disinfectant
Ideal for all acrylic appliances
ValClean Combined Flexible Denture Cleaner

FREE Practice Information Pack and location of your nearest Valplast® Certified Laboratory from RDT Technology Ltd.
Tel: 01903 700307 www.valplast.info

The application of strain-gauge analysis to evaluate the biomechanic behaviour of osseo-integrated implants. Photo-elasticity is used for determining stress concentration factors in irregular geometries. The strain-analysis gauge methodology on dental implants provides both in vitro and vivo measurement static under static and dynamic loads. Finite element analysis can simulate stress using a computer-created model to calculate stress, strain, and displacement. An analysis of the impact of mechanical/technical risk factors on implant-supported reconstructions are beyond the scope of this publication; however, the replacement of lost teeth by implant therapy without exemption, provide a feeling of restitutio ad integrum. The means by which the restoration of the original condition at the “crown/root” interface is idealised will be detailed.

The structure and composition of teeth is perfectly adapted to the functional demands of the mouth, and are superior in comparison to any artificial material. So first of all, do no harm…” Anonymous

The final part of Kenneth Serota’s paper will be published in a future issue of Dental Tribune U.K.

References

Kenneth S Serota, DDS, MSc, graduated from the University of Southern California in 1975 and was inducted into the Gamma W Sutter Memorial Key for excellence in Profession. He received his Certificate in Endodontics and Master of Medical Sciences Degree from the Harvard Forsyth Dental Center in Boston, MA. A Professor of Endodonic Surgery and Endodontics of the American Association of Oral and Maxillary Surgeons, he is a pioneer in dental laser medicine screening procedures related to dental pathology. His passion is education and most recently e-learning and rich media. He provided an interactive endodontic program for the Ontario Dental Association and was awarded the Gold Key for his efforts. GDA, award of recognition for professional excellence. He was selected for Fellowship in the Pierre Fauchard Academy and is a Fellow of the Academy of Dentistry International. The author of over sixty publications, he has lectured on Endodontics internationally. He is on the editorial board of Endodonic Practice, Endodontic Tribune and Implant Tribune. The founder of ROOTS – an online educational forum for dentists and www.tdsonline.org in order to provide a clear understanding of the endodontic/implant algorithm in foundational dentistry. As

The image on the left is of a flat field periapical radiograph of the maxillary left central incisor on the right, a small root field radiograph beam volumetric tomograph (Kodak voxel(TM), Kodak Dental Systems, Woburn, MA). The difference in visualisation of periapical pathology from a 3 dimensional to a 2 dimensional is as much as 20% (Roths et al, 2003).