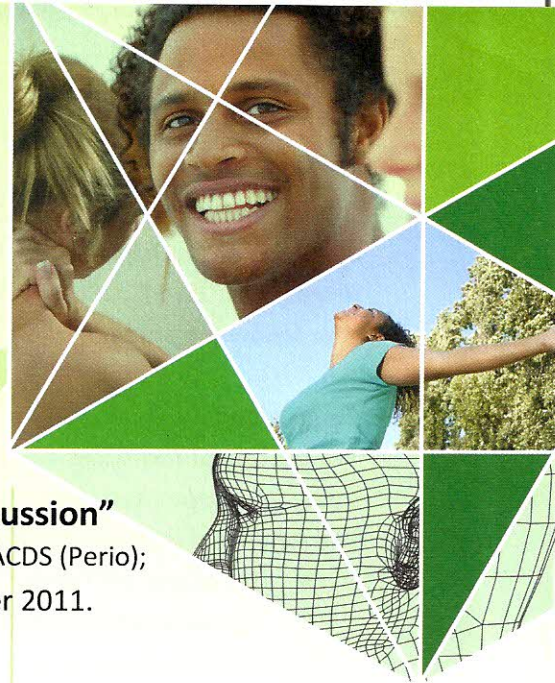




DMDI NEWS

dental & medical diagnostic imaging

A Centre of Excellence



September 2011

Newsletter 23

“Tooth versus Implant: Current evidence and case discussion”

Presented by Dr William Zhang; B.D.Sc. (Melb), DCLinDent (Syd), FRACDS (Perio);
at DMDI Professional Development session held on 07 September 2011.

The following is a précis of Dr Zhang’s presentation -

Difference between tooth & implant

Three common clinical questions asked by patients include -

1. How long will my teeth last?
2. How long will my implants last?
3. Should I have implant or implants to replace my tooth or teeth?
(Clinical cases were then discussed)

Research findings, published in the Journal of Clinical Periodontology and Clinical Oral Implants Research were discussed.

Osseointegration is defined as the direct functional and structural connection between ordered living bone and surface of load carrying implant.

Histological features of osseointegration include -

- (a) Bone to Implant Contact
 - maxillary implants > 50%
 - mandibular implants > 75%
- (b) Soft tissue found around osseointegrated implants
 - the tip of the loaded implant thread
 - the base of the thread for the unloaded implant

Biological Integration (tooth) versus Osseointegration (implant)

Biological Width = 2mm (barrier epithelium) + 1-1.5mm (CT adhesion)

Ref: Berglundh et al. 1991, Berglundh & Lindhe 1996

Probing around tooth & implant - Health versus Periodontal disease

References included - Lang et al. 1994; Abrahamsson & Soldini 2006; Etter et al. 2002; Schou et al. 2002.

Questions

1. How long will my teeth last?

Dr Zhang spoke about research findings for the survival of untreated teeth (one study) and the survival of periodontally treated teeth (four studies).

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Other evidences

Incidence of tooth loss during regular maintenances by periodontists after periodontal treatment ranges from 2%-5%. (Ref: Lindhe & Nyman 1984 (14 year follow-up study); Axelsson et al. 2004 (30 year follow- up study).

Conclusions

The pattern of tooth loss due to periodontal disease is:

upper 7s > upper 6s > lower 7s > lower 6s..... >lower 3s

The pattern of implant loss due to early failure & peri-implantitis is

- Teeth loss with initial furcation involvement during SPT ranges from 30-60%
- Periodontally affected teeth can be successfully treated and maintained with regularly tailored periodontal maintenance program.

Survival of the tooth does not equate to Success (free of complication). This may depend upon Sensitivity, Recession, Decay, Fracture (supra- or sub-gingivally), Wear (erosion & abrasion), Restorability (crown lengthening or exo), Root resorption, Endo lesion, Periodontal disease.

2. How long will my implants last?

Survival of implants after successful osseointegration (not early failure) may be affected by the type of implant utilized – Smooth surface, Rough surface (Minimally/Moderately/Rough); Bioactive surface (Osseospeed, SLActive, ProActive). Case studies were discussed.

Survival of an implant does not equal success of the implant (free of complication). There may be prosthetic and/or biological complications.

Implant retained restorations need regular maintenance. A ten (10) year prospective study showed lack of regular SPT is correlated with a higher incidence of bone loss and implant loss (Rocuzzo et al 2010 (COIR)).

3. Should I have implant or implants to replace my tooth or teeth?

A variety of case studies were presented and discussed.

Further details and information about Dr Zhang's comprehensive presentation are available from DMDI.

Next Professional Development session at DMDI –

"Trauma, Traps and Anomalies - The Role of Cone Beam CT in Paediatric Dentistry"

Presented by Associate Professor James Lucas (Specialist Paediatric Dentist)

When – Wednesday 05 October 2011, commencing 6.30pm

Where – Unit 9, 1175 Toorak Road Camberwell 3124

Please rsvp to reception@dmdi.com.au or telephone Pamela on 9889 1771; and also advise if you require parking (under the building). Light refreshments served from 6.30pm.

Plenty of parking is also available on Summerhill Road, opposite Leo's Supermarket which is a 2 min walk to DMDI.

DMDI is the specialist for ALL dental diagnostics! Contact DMDI for further information.