

A Bulletin Dealing With Issues For Dental Health Professionals

Aesthetics and Function of Implant Bars

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In the pursuit of better anchoring systems, the cast implant bar has become a remedy of choice for over denture fixation. To accommodate different techniques and approaches, clinicians can choose from pre-manufactured or custom made bars. These bars whether plastic, wax or titanium will provide the basic form to build onto or around the implants in order to provide design strength. Bulk form is needed to avoid flexing of the bar during function. Too much flex of the bar over time may initiate metal fatigue, screws loosening, cervical bone loss around the implant or failure of the implant itself. Various attachments that can be placed on or within cast bars do fit different categories, such as ones that circumvent the bar (*Hader-Preat, Bredent-VSP*) or are extra sagittal (*Bredent SG, Era, Ceka*) or other types that sit directly on the bar (*Bredent Universal, OT Rhine, Dala Bona*). These are all great attachments for most cases, however inter arch space can limit their use. Not so with the Bredent SG or universal male

when attached to the labial or lingual aspects of the implant bar. Since the ball position can better be determined after a diagnostic denture has been made to establish aesthetics and function; Plastic preformed bars with four studs (*Bredent VKS SG Bar*) are available and can be used between implants with the studs positioned on the labial or lingual positions. This configuration permits its use in small inter arch cases without compromise to the bar strength or the anchoring system. Furthermore there is a 1.7 mm stud bar as well that will provide more space over the traditional 2.2 mm stud size. In order to factor out the lever arm mechanics on the supporting implants, the chrome cobalt super structure should contact and rest on the superior aspect of the bar, which will direct the loading to the gingival ridges. The attachments will merely act as a retentive source to anchor the over denture to the implant bar. There are contrarian views regarding circumventational attachments when placed parallel to each other along the anterior

portion of the bar. In this example the attachments allow functional rotation of the prosthetics around the bar. However when designing a treatment plan, circumventational attachments should be used in conjunction with two implants with a bar joining them together to achieve functional rotation. Should there be more implants, such as four, six or more than the circumventational attachment should not be used in the posterior distal extensions since the rotational ability is greatly minimized and stresses are placed on the attachments leading to increased wear. Attachment life span is an important issue when selecting a resilient plastic attachment. The repeated insertion and removal of the nylon retentive element will over time wear down the anchoring capability of the attachment (*Locator, Rhine, Era, Zaag*). Feedback from many clinicians has indicated that nylon in the oral environment can become hard and will start to wear down the metal part of the attachment. **continued on page 2**

Are You Ready for PIPEDA - The Privacy Act ?

The Federal government with all its wisdom has implemented the Personal Protection and Electronics Documents Act. This act will impact dental health professionals across Canada by duplicating much of the current privacy protection already in force by our existing regulatory bodies. As a former president of a regulatory college, it has

been my experience, that when government passes down an act, it also develops templates, to adopt policies, guidelines and by laws. In this case the only information that actually applies to the requirements in the act is unclear and somewhat ambiguous. The PIPEDA provides a broad overview rather than templates which are formal, precise way points

to implementation. In Ontario we are regulated under the Regulated Health Profession Act and record keeping and privacy issues are part of the Quality Assurance Program. The fact is we already have too much documentation to contend with in our daily administration. However until we can lobby the Federal Government to exempt dental **continued on page 3**

Aesthetics and Function of Implant Bars cont'd



An example of how the SG requires less interarch space.



The built-in guide plane of the female locates the right position.

Our thanks to Dr. Morley Rubinoff and Prism Dental Lab.

Life span of the attachments can be addressed through studies such as the one conducted by M. WICHMANN and W. KUNZE published in the Journal of Prosthodontics 12, 404-9, 1999. Their study of plastic versus metal attachments indicates that replacement of the plastic retentive elements restored friction of the initial manufacturer's retention, whereas the metal attachment even after reactivation did not meet the initial retentive factor. Most manufacturers have adopted nylon as the material of choice, however in the pursuit of an alternative material with better longevity bredent decided on "duro-plast" a thermoplastic resin that is insoluble and infusible. Some of the important attributes of "duro-plast" are that it possesses adequate strength, resilience and abrasion resistance to withstand abnormal usage. It also is impermeable to the oral fluids to the extent that it will not become insanitary or disagreeable in taste

or odour. The material is insoluble in the oral fluids with no evidence of corrosive attack. Even with all these properties, patients should endeavour to keep their appliances and the resilient element cleaned at least twice a day. This daily routine can increase the longevity of the retentive element. Also important is the availability of sequentially retentive elements that start with green (4 Ncm), yellow (6 Ncm) and red (8 Ncm). Actual field reports from clinicians have indicated four to six years of reliability before replacement. The male stud is an integral part of the attachment and the materials used are also important and should be as hard as possible. In many instances, titanium or gold alloys make up the bulk of these elements. Castable components should have a high Vickers hardness (e.g. 240 HV +) in order to prolong stud life. The SG female attachment also has two positive design parameters that stand out.

One is the proximal wall that helps locate the proper position and helps the patient facilitate insertion. The other area is the snap itself which is located on the inner area of the horseshoe design. With this combination of external and internal retentive surfaces, a superior retention occurs to over twice the retentive surfaces of other plastic to metal attachments. In conclusion, the Sg and universal stud require significantly less inner arch space when they are attached to the side of the implant bar. The built in guide plane of the female element ensures patient satisfaction as it locates the right position to snap the inner retention over the stud. The retentive "duro-plast" material will by virtue of its composition (*polystyrene type resin*) last longer than conventional materials like nylon.

Source; Peter T. Pontsa, RDT



FG Diablo Diamond Inverted Cone for grinding zirconium.

Featured Product: Bredent's FG Diablo Diamonds

Bredent's all new Diablo FG Sintered Diamond Rotaries are specifically manufactured to cut and trim any new generation ceramics, such as sintered zirconium oxide, glass, pressible ceramics and CAD/CAM ceramic materials. This superior diamond grinder

cuts effectively down to the last layer with razor sharp efficiency. Diablo FG is a very economic system with self regenerating grit and extended durability. The Diablo sintered diamonds are used in the air turbine. There are six different shapes for various applications such as

the flame, cylinder, round, inverted cone, torpedo and two bud types. They are sold individually or in the six piece assortment (33001166). For a brochure or pricing call Dent-Line at 1-800-250-5111 or e-mail us at info@dent-line.com.



Bredent's Airaqua Turbine

Featured Product: Bredent's Airaqua Turbine

New from Bredent, the Airaqua Turbine is a handy compact unit, with a light weight hand piece for precise shaping of hard materials such as high performance ceramics, sintered zirconium oxide, pressible ceramics and glass. The airaqua turbine features an adjustable

spraying device to spray an air/ water mixture on to the processing area. Water cooling avoids overheating of the material. The formation of micro cracks is reduced dramatically and processing of the ceramic materials becomes more predictable. The water spray traps the cut ceramic particles which

protects the grinding tools and extends service life. An optional hand piece adapter is available for using the airaqua turbine in a milling machine unit. This option will facilitate shaping ceramic implant abutments. For your brochure and pricing, call Dent-Line at 1-800-250-5111.

Privacy Act cont'd

health professionals we are legally compelled to comply by January 1st, 2004. For some of us it will be a bit of a rush to complete the requirements on time and others will simply be late. The following outlines some details on the process and some of the steps you can take to become compliant.

The components of a privacy code must meet the ten principles of PIPEDA. These principals give individuals control over how their personal information is handled in the private sector. Those principals are accountability, identifying purpose, consent limiting collections, limiting use, disclosure, retention, accuracy, safeguards, openness, individual access and challenging compliance.

Becoming proactive in your organization can begin with designating the organization's information officer. For many small offices it makes sense for the owner, the president or a senior staff member to be chosen.

The next step is to develop a Privacy Policy that outlines why the personal information is collected, how it is stored, how it is used, shared and how it is destroyed. There are primary reasons why health professionals collect, use and disclose personal information, and it tends to apply to a particular group like patients, clients and the general public. Secondary reasons include invoicing and collection, recall visits, responding to questions and the sale of the practice or laboratory.

As a general rule you must obtain consent for collection of personal information and it may be implied consent or obtained in writing.

You should also consider implementing safety protocols that would protect and manage the personal information gathered. This includes training staff to comply with the protocols and policies.

When collecting personal information, it is very important to keep information current, complete and accurate since individuals generally have the right to access personal information you hold and they don't have to be a patient or a client. You must provide access within 30 days of the request and correct any errors the person has requested.

An internal complaints system that is simple and accessible should be in place to investigate any complaint and provide a decision with reasons.

The Information and Privacy Commissioner of Canada investigates complaints about an organization's personal information handling practices. The organization must be open about the Privacy Policy and must make it available to the public through a brochure, website and on request to anyone, not just clients and patients.

Finally, the organization should initiate a plan to monitor compliance of the Privacy Policy which includes annual reviews and updates of the Privacy Policy and also a refresher training session for all staff. The information given here should provide some practical suggestions for how some health professionals can review their information handling.

The personal information protection act is ambiguous and unclear in the broadest sense. Therefore a prudent

and informed approach is advisable. Seek out legal council or your regulatory bodies for further guidance. Even though the Federal Government has managed to shackle us with more "bureaucracy", we as professionals should maintain a leadership role and in doing so set a good example.



**Peter T. Pontsa, RDT
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For more information on the privacy policy of Dent-Line of Canada you can visit our web site at www.dent-line.com and click on our "Privacy" button.

The Information and Privacy Commissioner can be reached at:

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"The Information and Privacy Commissioner of Canada investigates complaints about an organization's personal information handling practices."

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About Our Organization...

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Study of Implant Supported Overdentures

A clinical study on implant supported over dentures was conducted with 36 patients. The over dentures were fabricated to replace their conventional dentures. The study split the group in half. Eighteen patients received a dolder bar; the other half received a ball type attachment. The clinical studies were done over six years and the examination

over the period indicated the following conclusions. The overall periodontal indicators such as the plaque index, sulcus bleeding and the probing depths were generally similar in both groups. However, the group that were supplied with the dolder bar on implant with an narrow neck did exhibit larger amounts of plaque and a slightly increased bleeding

index. The other group that were supplied the ball attachments indicated less plaque and were rated easier to clean by the patients. The patients in both groups reported improved function over conventional dentures. This included phonetics, mastication and satisfactory retention of the denture itself. **Source; J. Periodontal 73 1067-1070, 2002.**

Denttechnica du Québec 2003

We were pleased to attend another successful Denttechnica du Québec which was held in Montréal last October 24th and 25th. Congratulations to Mr. Ettore Palmeri and Mr. Jean Compagna and their assistants who helped co-ordiante the only exhibition

for dental technology in Québec. The event was well attended by dental health professionals who visited the exhibits to see what was new and also to view the table clinics and speakers. There were seminars on ceramics, metals, pressibles and attachments with

speakers such as Mr. Stefan Borenstein, RDT, MDT, Peter T. Pontsa, RDT, Ken Chizik, CDT, RDT and Kerstine Beine, CDT, MDT to name just a few. If you missed this important event, maybe we will see you in Montréal next October for **Denttechnica du Québec 2004!**

Technorama 2004:

Technorama will be held at the **Double Tree International Plaza Hotel on April 2nd and 3rd, 2004.** This will be a special event since the Denturstit

Association of Ontario will be holding their Annual General Meeting. In addition, they will be celebrating their 30th anniversary of denturism in Ontario with a private

function. As a result rooms may be scarce so make sure you book early since this event will no doubt be very popular and successful.

Ontario Study Club for Osseointegration (O.S.C.O.):

The Ontario Study Club for Osseointegration is holding its annual membership drive for 2004 and is inviting members to continue their membership, while encouraging new members to join. There will be three evening seminars at the Vaughan Estates that will include dinner and two separate full day seminars.

The evening seminars will feature speakers such as *Mr. Rudy Huber* on Dental Implants (March 9th), the very popular *Member Panel Discussion on Alternative Treatment Plans* (May 18th) always a very interesting and interactive meeting and *Dr. Eric van Gorder* on Dental Implants (October 26th). The two Full Day Serminars will

feature *Dr. David A. Garber* on "Success by Design - Where to From Here?" (January 30th) and *Dr. Jack Hahn* on "Implant Dentistry - Return to Simplicity" (October 1st) which will be held in conjunction with the *2004 Canadian International Dental Congress*. To become a member, please contact www.osco.org.

Special Announcements:



First Year Students with Mr. Charles Carrier, Mr. Raymond Haché and Mr. Peter Pontsa.

On October 24th, 2003, Peter T. Pontsa, RDT and Angela van Breemen, on behalf of Dent-Line of Canada Inc. and Renfert USA, visited Le Collège Édouard-Monpetit, located in Montréal. The first year dental technology students received a gift of a waxing instrument and wax samples, while a Renfert dip pot was donated to the school for use by Professor Charles Carrier in demonstrating the latest wax techniques to the students.

We thank the dental technology coordinator Mr. Raymond Haché for allowing us to visit and we wish all the students an excellent future in the field of dental technology.