People who get regular dental X-rays are more likely to suffer a common type of brain tumor, US researchers said on Tuesday, suggesting that yearly exams may not be best for most patients.

The study in the US journal Cancer showed people diagnosed with meningioma who reported having a yearly bitewing exam were 1.4 times to 1.9 times as likely as a healthy control group to have developed such tumors.

A bitewing exam involves an X-ray film being held in place by a tab between the teeth. Also, people who reported getting a yearly panoramic exam -- in which an X-ray is taken outside the mouth and shows all the teeth on one film -- were 2.7 to three times more likely to develop cancer, said the study.

A meningioma is a tumor that forms in the membrane around the brain or spinal cord. Most of the time these tumors are benign and slow growing, but they can lead to disability or life-threatening conditions.

The research, led by Elizabeth Claus of the Yale University School of Medicine, was based on data from 1,433 US patients who were diagnosed with the tumors between the ages of ages 20-79. For comparison, researchers consulted data from a control group of 1,350 individuals who had similar characteristics but had not been diagnosed with a meningioma. Dental patients today are exposed to lower radiation levels than they were in the past, but the research should prompt dentists and patients to re-examine when and why dental X-rays are given, said Claus.

“The study presents an ideal opportunity in public health to increase awareness regarding the optimal use of dental X-rays, which unlike many risk factors is modifiable,” she said.

The American Dental Association’s guidelines call for children to get one X-ray every one to two years; teens to have one every 1.5 to three years, and adults every two to three years. The ADA said in 2006 there was little evidence to back up the routine use of full-mouth dental X-rays in patients without any symptoms.
The survey of more than 1,000 people aimed to determine which oral health problems are generally considered the least desirable to one’s appearance.

Missing teeth was considered to be the least desirable problem by 57 per cent of respondents, and stained teeth turned off nearly one in five respondents (18 per cent).

Opinions were also sought on cracked teeth, uneven teeth and receding gums, problems that put off a combined total of roughly one in five respondents (18 per cent).

According to Dr Nigel Carter, Chief Executive of the BDHF, the findings do not come as a great surprise: “Images portrayed in the media of celebrities have led to a society where image and the way we look is an important facet of daily life. Young people particularly associate celebrities with attractiveness, achievement and affluence, so it is only natural they will seek to mimic what they see on TV and in print. … Celebrity smiles can be particularly endearing, so it is little wonder survey results indicate missing and stained teeth are the least desirable oral health issues for the way you look.”

Survey finds most unattractive oral problems
Implant failure may be related to bisphosphonate use

The results of a study conducted at the New York University College of Dentistry seem to confirm the hypothesis that the use of oral bisphosphonate is connected to dental implant failure. In the case-control study, more than 500 middle-aged female patients with failed dental implants were compared with women from the same age group whose implants were still intact.

Clinical evaluations at the Department of Periodontology and Implant Dentistry were conducted between 1997 and late 2004. According to the researchers, the clinical data gathered from these examinations showed that in women whose implants had failed the odds of having taken bisphosphonate orally were almost three times higher. Dental implant failure related to the use of oral bisphosphonate also seemed to be more likely to occur in the maxilla.

Neither the quantity nor the duration of bisphosphonate use was evaluated.

Although the risk of implant failure is low, the researchers concluded that oral bisphosphonate could pose a risk to the success of dental implant therapy and should be prescribed with caution.

Earlier research on the association remains ambiguous, as results from Sweden and Australia have not found increased risks for implant failure when bisphosphonate was taken by patients before or after implant placement.

However, the majority of clinical organisations still recommend that long-term users stop taking bisphosphonate before undergoing dental implant procedures to avoid complications.
We at Dentallabor Cera-Tech in Liestal/Switzerland, concentrate to a large extent on CAD/CAM technology and spend a lot of time advocating the cause of all-ceramics. Nevertheless, metal ceramic, comprises around 50% of our range in Liestal/Switzerland, continues to remain an indispensable part of our programme.

Gold accounts for 70% of this, and trend increasing – non-precious metal alloys 30%. The following article presents a corresponding case example.

Customer requirement and planning
The patient’s tooth 11 was fractured and tooth 21 showed severe cracks (fig. 1). The requirements of the dentist were clearly defined, and communicated by oral agreement and an order form: the crowns were to be implemented as a standard restoration in metal ceramic, and at the same time blend harmoniously with the patient’s oral situation.

For this reason, we decided to have the shade determination performed in the dental practice, and instead of using the casting technique, to fabricate the crown coping by milling a CAD/CAM restoration from a non-precious metal alloy. For the veneer we chose VITA VMK Master, a new metal ceramic for veneering in the classical style, and which promises brilliant shade reproduction.

The implementation
For shade determination we use – with growing enthusiasm – the VITA Linearguide 3D-Master, which is also finding increasing approval on the part of our dentist customers. We like the fact that it is based on the already known linear principle because it does not require any rethinking in terms of the concept. Also in the case described here, the dentist used this for determining the tooth shade. In addition to this, he documented the situation prior to treatment and the results of shade determination with regard to lightness and chroma by means of digital photographs which he sent us by e-mail. Further discussion of the case took place by telephone. This procedure usually enables us to achieve a remarkably high degree of accuracy, even without the dental technician having come into contact with the patient in person.

The master model was scanned and used as a basis for the virtual framework design, and the latter was milled from a non-precious metal alloy. An important prerequisite for digitisation is that the dentist must be accurate in his preparation work, so that the preparation margin can be easily read by the scanner. The risk of cavities and porosities which could endanger the veneer, and in the event of late cracks result in work covered by guarantee, is no longer given in CAD/CAM manufacture, since the non-precious metal blanks are industrially fabricated according to unified quality standards. A further advantage of the milled non-precious metal copings is their high degree of marginal accuracy. The work required in the fitting of the copings is reduced to a minimum – only the mounting pins have to be removed, and the margin finished in such a way that it tapers thinly.

We used a silver and palladium-free alloy which has high strength values that enable it to withstand a high load capacity. This offers a high-quality, and, above all, a cost-effective alternative to all-ceramic and gold content solutions.

For the opaque application we used the SPRAY ON procedure (fig. 2), so that a thin and homogeneous layer thickness is achieved, which at the same time has good covering power. The restoration was built up using the classical dentine/enamel layering known, for instance, from VITA OMEGA 900. In this way, by using an efficient layering technique, I can quickly and easily obtain an aesthetic result. I am impressed by the stability characteristics of the ceramics. This material property is an advantage especially in the case of larger restorations.

VITA VMK Master offers a comprehensive assortment for
individualisation. In this case, however, because a standard solution was requested, I kept to just a few different materials, and modelled only the mamelons. I built up the incisal edge and the approximal areas by applying ENAMEL (EN1), and OPAL TRANSLUCENT (OTT) (fig. 5). The restoration was fired at 950°C, the approximal and palatal contacts adjusted, the latter in the articulator with lateral and protrusion movements under canine guidance before the finishing of the restoration.

In this case, because of the very low degree of shrinkage, which I will be pleased to take into account when layering in future. A generous application of porcelains at the approximal points in order to compensate for shrinkage is not necessary to this extent, as I am accustomed to doing with other ceramics. The final glaze firing achieves a shade brilliance which awakens the tooth to life. There is a natural harmony between opalescent and translucent regions. As with every ceramic veneer, the actual success of the restoration can only be seen when the restoration is seated in the patient’s mouth. Only then is it possible to assess whether the crowns – as desired by the patient – are harmoniously matched to the patient’s oral situation. In our case, patient, dentist and technical technician alike were satisfied with the restoration (fig. 4).

Conclusion

Our aim is to provide an attractive solution with natural aesthetics in the VMK technique, even in cases which initially do not look very promising. If dentist and / or patient insist on a metal ceramic instead of a full ceramic highend solution, we can offer good, competitive results using our CAD/CAM system and VITA VMK Master, which is based on a combination of state-of-the-art equipment and highquality materials. Thanks to the use of a ceramic which is simple to process, pleasant to work with, and has a wide processing interval and accurate shade reproduction, which, in combination with the VITA Linearguide, enables the fabrication of crowns with natural aesthetics, time-consuming adjustments and corrections are usually unnecessary. We would appreciate a sample copy of any reprints.

VITA Zahnfabrik H. Rauter GmbH & Co. KG

Headquartered in Bad Säckingen/Germany, VITA Zahnfabrik H. Rauter GmbH & Co. KG has been developing, producing and marketing innovative solutions for dental prosthetics according to consistently high quality standards for over 85 years, and has been known from the very beginning as a pioneer and worldwide trendsetter. The VITA shade standard, for instance, is recognised internationally in the dental branch as a shade reference system. Users in 120 different countries benefit from the comprehensive range of products and services provided by VITA Zahndentwerk. These include analogue and digital tooth shade determination systems, acrylic and ceramic teeth, veneering and framework materials for conventional and computer-aided manufacturing procedures, dental equipment as well as a wide range of service and training facilities.

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Un-cosmetic dentistry
Are you ready to reduce your dependence on porcelain restorations?

Dr Michael Zuk
Canada

While there are some occasional references to concern about the overuse of porcelain, many articles in dental trade publications show off before and after dental makeovers that from my perspective were quite satisfactory prior to expensive intervention. I will not argue that there are people who truly have disappointing smiles and they can benefit greatly from cosmetic dentistry, but all too often people with very good smiles are embellished to a distorted perception of their teeth seem to be easy victims.

“Smilexia” is the fanciful term I coined for this disorder, which appears to affect successful young women more than others. If you open the pages of any journal published by the American Association of Cosmetic Dentistry, you will no doubt find at least one or two of these patients having extensive veneer treatment that could easily have been avoided with unbiased professional advice. The problem is that too many dentists have dedicated their lives to pure cosmetic dentistry, which is often based on using porcelain as a cure-all.

Sadly, many of the cosmetic dentists recognised as the top tier appear to use their standing as a licence to drill. It is time to adopt a significant change in philosophy if the dental profession wishes to maintain any level of integrity. Lip service to conservative cosmetic dentistry means nothing. To truly practise “un-cosmetic dentistry”, a dentist must back away from ceramics and make use of composites to restore worn edges in combination with orthodontics to correct alignment.

This style of treatment does not have to be unprofitable. It does not have to be only for the simplest of cases either; actually, very complex cases can be treated to a high standard when multiple disciplines are employed together. The collaboration of specialists can be one alternative, but for patients on a budget or in areas with lower access, a general dentist trained in advanced therapies can offer comparable results for a fraction of the fee.

Biggest bang for the buck—The STO combo

Let’s cut to the chase: if you are a general dentist and want to knock your practice out of the park with new opportunities, look at venturing into the realm of advanced shorter-term braces. I specifically say “shorter” because your goal needs to be always trying to be faster because people hate being in braces, and aligners are often too slow or they do not give the dentist enough control of tooth movement.

There are a number of dentists who promote STO, but I developed my own system before I had heard of any others so I have some different ideas. Frankly, levelling and aligning simple orthodontic cases is easy and can be learned through just a short course, which these-dentists (Drs Swain, Barr or De Paul) appear to teach very well. I would rather remain on the fringe of even these trend-setters, and offer my twisted perspective with less corporate influence.

As hugely popular as these STO courses are, there is however some potential for abuse by dentists who simply have a weekend course and no other training in orthodontics. While I would rather see a dentist do more orthodontics than veneering, orthodontists are partially justified for their concerns about GP orthodontics.

Taking courses alongside orthodontists and reading their journals, it is apparent that there is negative sentiment directed towards general practitioners who dare to bracket teeth. I do feel that a united profession is a favourable concept but, having experienced extreme levels of sabotage in my local area, I now refer less than in the past. Some other general dentists have mentioned similar problems (on online forums) with turf protection that appears oddly focused on orthodontics.

An article recently used the term “soft science” to describe orthodontics, and I would certainly agree that it is difficult to claim that orthodontists know the “right way to straighten teeth”, since few of them agree on anything. The reality is that the schools of thought in orthodontics are as polarised as the holy wars between the myo-centric doctors and the centric relation believers.

As an example, the use of the Herbst appliance forces the TMJ forward, in an attempt to correct a deficient mandible. This is like someone standing on the balls of her feet to be taller. While the data, but the device has been used for 100 years already, Mandibles are not stimulated to grow after all, and patients may be holding their jaw forward in a Sunday bite simply to get their uncomfortable braces off.

Orthognathic surgery may be vastly underutilised in some cases and overused in others. The use of TADS appears to offer some promise, and while an oral surgeon may find it a nuisance to bother with placing them, a general dentist may be able to get them in place with little difficulty. Orthodontists often tremble at the thought of using a needle (like I did in dental school), so the price goes up as the patient heads to the oral surgeon.

BIAS: A particular tendency or inclination, especially one that prevents unprejudiced consideration of a question, prejudice

So this article is obviously biased towards expanded skills for the general dentist, but I do respect the need to pick your battles in treatment and refer when the case demands it. I essentially do not believe in picking a fight with any rubbish from specialists who want to dictate what a general dentist can and cannot do. If you do not like my ideas, tough luck because the ones you have may not stand up under close scrutiny. I do not want to waste my time justifying anything I choose to do and if I am taking a course beside an orthodontist who is snivelling that he will start doing fillings and extractions, that is awesome; I may have an opening for an associate.

As excited as I am about STO, I think a two-day course is only a taste of what you need to know. It is like taking a two-day self-defence class and then thinking you can enter mixed martial arts. The problem is not what you learn, but the cases that you attempt that are actually much more complex than you realise (you will be defeated!). You MUST take a full orthodontic course such as the one taught by Dr Richard Litt, and you are insane not to take a series of oral rehabilitation courses from Dr Frank Spear or Dr John Kois.

Adult orthodontics is full-mouth reconstruction, and the treatment of worn dentition is...
DENTAL TRIBUNE Middle East & Africa Edition

Media CME

“...the market is shifting towards dentists who are ready to mix up their training.”

Dr Michael Zuk is the author of the book Confessions of a Former Cosmetic Dentist. As a consultant to several marketing programmes, including Highspeed Braces.org.uk and Aller Toothache.com, the dentist has cultivated unique niches as alternatives to the veneer-based practice model. He can be contacted at drz@bowerdental.com.

I know, NOT ALL cosmetic dentists are Veneer Nazis, ...”

Cosmetic dentists have a tendency to veneer everything. They veneer teeth straight because it is an easy claim to be made. They veneer teeth to get rid of wrinkles and blemishes. They veneer teeth to whiten and straighten them. They veneer teeth because the old theory needed times in braces are often lies that need to be corrected as soon as possible to stop the abuse that is going on. Cosmetic dentists need to reprogramme to back off and get some air. And orthodontists need to give a little elbow room to their referring dentists who want to offer some orthodontics. The smart ones maintain a positive relationship and often see referrals from the primary care dentist because they know, NOT ALL cosmetic dentists are Veneer Nazis, and NOT ALL orthodontists tell patients that GP orthodontics causes root resorption.

My suggestion for breaking an aesthetic obsession is “cosmetic, which is cult if you have focused on the other side,” ie, NOT ALL cosmetic dentists are Veneer Nazis, and NOT ALL orthodontists tell patients that GP orthodontics causes root resorption. Any time you stick to a single series of training programmes, you start to pick up biases that warp your thinking. You will find that the ideas within the dental profession are as extreme as the religions and political beliefs around the world. Many elements of the various philosophies can be very convincing, but I think we must step back and make up an individual philosophy that puts the patient first.

If you take the average patient, this means that you will offer fast, affordable, reversible and conservative treatment.Mil-

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A comparison in postoperative healing of sites receiving non-surgical debridement augmented with and without a single application of hyaluronan 0.8% gel

By: Koshal, Amit; BDS (Hons) MF GDP (UK); MFDS RCS (Eng); Patil, Parvesh; BDS MF GDP (UK); MFDS RCS (Eng); Bolt, Robert; R BDS (Hons) MFDS RCS (Eng); Raghford, Ducett BDS Galgut, Peter N; PhD, MPhil, MSc; Lond, BDS (Rand), MRDCS (Eng), LDS RCS (Eng), MF GDP (UK), DDF Hom, ILTM

Abstract

Hyaluronic acid forms the basis of the extracellular matrix in which the cell growth takes place. A commercial preparation of hyaluronic acid called Hyaluronan (Genigel) has recently been launched in gel form for oral use to promote healing in inflamed sites and sites exposed to periodontal disease. 52 patients with moderate to severe periodontal disease who were managing their condition and not requiring surgery received a single application of Hyaluronan gel immediately after thorough root surface debridement. Sites to receive the Hyaluronan gel or a placebo gel were selected on a randomised basis for each patient.

Aim: The aim of the study was to determine if any beneficial treatment effects were derived from a single application of Hyaluronan after nonsurgical therapy.

Materials and Methods 52 patients were randomly selected from those who attended for treatment for chronic periodontal disease. For inclusion in the study all patients had not received the active gel. It was concluded that highly significant improvements in clinical variables of bleeding on probing and periodontal pocketing in the sites that received the Hyaluronan compared to the placebo sites that had not received the active gel. It was concluded that highly significant improvements in healing after nonsurgical therapy can be achieved by a single topical application of Hyaluronan immediately after root surface debridement. If this observation is borne out by further trials, the potential for achieving enhanced healing after treatment has considerable clinical significance.

Introduction

Chronic Adult Periodontitis affects over 2/3 of all patients in the aged greater than 45 years (Agerholm D 2001), and is also the second most common cause of tooth loss in the U.K. (McCaul LK et al. 2001). Treatment of these patients has characteristically involved non-surgical scaling and root-planing to provide a smooth root surface for reattachment, supplemented with intensive oral hygiene instruction, to prevent contamination of the healing process during the healing and reattachment phase. Reattachment has been shown not to occur, and some periodontal pockets seem to be resistant to healing in spite of vigorous mechanical debridement. More recently, this approach to treatment has been reevaluated, so that instead of aiming for smooth root surface treatment, the aim is to disinfect and detoxify the root surface cementum of these sites. Topical agents are increasingly being used as adjuncts to manual root surface debridement in an attempt to promote healing.

Although Chlorhexidine irrigation is almost ubiquitous in general dental practice for the supplementation of nonsurgical periodontal therapy, a recent review has concluded that there is no benefit of this over scaling and root planing alone (Hanes P et al 2005). Locally delivered Chlorhexidine in the form of controlled release resorbable “chips” has been shown to have a significant adjunctive effect (Kilroy W 1988), but controlled release Doxycycline was shown in a comparative study of topical antibacterials with Chlorhexidine (Salvi E et al. 2002) to be the preparation of choice. These devices are only effective at the site of placement and are relatively costly. However, increasing evidence indicates that, while plaque is the primary aetiological agent in establishing periodontal disease, the host response, rather than the bacterial challenge is critical to the bacterial challenge is critical to the initiation and progression of periodontal diseases. More recent work has therefore focused on the management of the host response, rather than the microbial challenge from bacterial plaque biofilm.

“Periostat” (Alliance Pharma UK) is a sub anti-microbial doxycycline preparation. It derives its benefit from the well-documented anti-inflammatory properties of the tetracycline group of antibiotics and several studies have concluded that this product achieves significant attachment gains and proband deep reductions over and above those achieved by scaling and root planning alone (Abel et al. 2005). However, it has the major disadvantage of being a systemic preparation, with long treatment times, and may need to be repeated at regular intervals. More recently a topically applied anti-inflammatory product based on Hyaluronic acid (Genigel: Oralident UK) has been launched. Hyaluronic acid (HA) is a linear polymer de-ribed from two re-peating disaccharide units (D-Glucuronic acid and N-acetylglucosamine), and is a natural constituent of the body’s glycosaminoglycan (GAG) population. Its synthetic form is referred to as Hyaluronan and is avail-able in gel or liquid preparations for topical oral use. It has many properties that make it a potentially ideal molecule for assisting wound healing by inducing early beneficial granulation tissue forma-tion, inhibiting destructive inflammation during the healing phase, promoting ep-ithelial turnover and also con-nective tis-sue angiogenesis (Ichikawa et al 2002, Moseley et al 2002, Chen et al. 1999). In add-ition, it has been demonstrated that HA has antibacterial proper-ties in vitro (Pirnazar et al 1999). Clinical studies have shown that topical application of Hya-luronan promotes healing of both leg ulcers (Ortonne 1996), and the nasal mucosa after sur-gery (J Chen et al. 1999). In add-ition, it has been demonstrated that HA has antibacterial properties in vitro (Pirnazar et al 1999). It has also been shown to reduce the im-

Table 1: 5BCMF5PEFNPOTUSBUFQPDLFUEFQUINFBTVSFNFOUTJOUIFUFTUBOEDPOUSPMTJUFTGSPNCBTFMJOFUPUIFUISFFNPOUIQPTUUSFBUNFOUBTTFTTNFOU

Table 2: 5BCMF5PEFNPOTUSBUFQPDLFUEFQUINFBTVSFNFOUTJOUIFUFTUBOEDPOUSPMTJUFTGSPNCBTFMJOFUPUIFUISFFNPOUIQPTUUSFBUNFOUBTTFTTNFOU

Table 3: 5BCMF5PEFNPOTUSBUFQPDLFUEFQUINFBTVSFNFOUTJOUIFUFTUBOEDPOUSPMTJUFTGSPNCBTFMJOFUPUIFUISFFNPOUIQPTUUSFBUNFOUBTTFTTNFOU

Table 4: 5BCMF5PEFNPOTUSBUFQPDLFUEFQUINFBTVSFNFOUTJOUIFUFTUBOEDPOUSPMTJUFTGSPNCBTFMJOFUPUIFUISFFNPOUIQPTUUSFBUNFOUBTTFTTNFOU

and is not inactivated by Sodium Laurel Sulphate. It has no known adverse patient reactions or drug interactions. As Hyaluronan is presented in gel form, it can be cheaply and easily delivered to all areas under- going therapy. When used in combination with nonsurgical periodontal therapy, a more effective outcome is achieved.

Aim

The aim of this study was to determine the clinical benefits of a Hyaluronan-based gel (Genigel Prof.) used as an ad-junct to nonsurgical periodontal therapy.

Methods and materials

52 patients were randomly selected from patients aged 18-65 who attended for treatment for chronic periodontal disease. For inclusion in the study all patients had never received the active gel and the nasal mucosa after surgery (Liguori et al 1997). For inclusion in the study all patients had never received the active gel and the nasal mucosa after surgery (Liguori et al 1997). The potential for achieving enhanced healing after treatment has considerable clinical significance.
All of the clinicians were calibrated against a standard predetermined protocol for the study, to ensure a high level of intra- and inter-examiner reproducibility. This was achieved by means of a preliminary pilot study in which five patients, who were not included in the study, were subjected to repeated measurements of the clinical variables used in the study by all of the clinicians. Both intra and inter-examiner reproducibility was found to be high.

Root surface debridement was carried out in all pockets equal or greater than 4 mm and the healing of these sites was used in the statistical analysis. Debridement was undertaken in two quadrants at a time. Patients were randomly selected to receive a post debridement application of the active gel or the placebo, in the treated quadrants. Wherever possible the left and right quadrants were used as adjunctive gel/non-adjunctive gel comparisons, but where this was not possible (due to too few teeth being present), the upper and lower quadrants were compared. 0.8% Hyluronan gel was applied into the pockets in those sites that had been randomly assigned to receive it, using a prefilled syringe after completion of the mechanical debridement. The other sites received an application of an inert placebo gel.

At both baseline and at the three months follow-up assessment appointments, bleeding on probing and pocket depths were measured and annotated for each subject. These variables were then consolidated into individual and then group mean values which were then subjected to simple (Student’s t-test) and linear ANOVA using the SAS statistical software package.

Results

It can be seen from table 1 that highly significant improvements occurred in the group bleeding scores in both placebo and test sites from baseline to the three-month review appointment. Similarly table 3 shows highly significant improvements in periodontal pocketing in both the placebo and test groups from baseline to three months after treatment.

In table 2 it can be seen that the mean improvement in bleeding scores in the placebo group was 24.6%, while in the test group it was over double at 59.05%. This is a highly significant incremental improvement (p<0.0005). Similarly table 4 illustrates the improvements in pocket depth measurements. In the placebo group pockets improved by an average of 18.45%, whereas in the test group it was nearly double that level of improvement at 52.59%. This is reflected in a highly significant p-value of p=0.0027.

While the group on the test drug (Hyaluronan) was shown to have a significant benefit over the time period of the study, the results of ANOVA illustrated in table 5 show that the individually significant results are substantiated when time/drug interactions are accounted for in the analysis.

Discussion

Hyaluronan has been identified in all periodontal tissues, being particularly concentrated in the non-mineralised tissues such as gingival and periodontal ligament. It is also present in low concentrations in mineralised tissues such as cementum and alveolar bone. Hyluronan has many structural and physiological properties, the use of exogenous hyluronan applied topically to inflamed periodontal sites, would appear to offer beneficial effects in modulating and accelerating the host response. Several double blind studies have demonstrated the beneficial effect of Hyluronan 0.2% gel in the treatment of gingivitis. Jentsch et al (2003) showed that 0.2% gel produced a significant improvement in both clinical and para-clinical variables in plaque induced gin-
Demineralised white spot lesions occur frequently after orthodontic treatment. Some teeth are more prone to demineralisation, typically the maxillary lateral incisors and the mandibular canine teeth. The disto-gingival area of the labial enamel surface is the area most commonly affected (Fig. 1). In the first few weeks after removal of the fixed appliances, there is a reduction in white spot lesion size and appearance, possibly due to the action of saliva (Fig. 2).

Various treatment methods have been proposed to assist the process of remineralisation. It is important to note that fluoride should not be used in high concentration, as it tends to prevent demineralisation and can lead to further unsightly staining. Low concentrations of fluoride, however, may assist remineralisation, such as those found in casein calcium phosphate materials. Additionally, stimulation of salivary flow by chewing sugar-free gum is helpful.

This article will describe a revolutionary new approach to the cosmetic treatment of white spot lesions (Fig. 3). With Icon, a noninvasive technology from German manufacturer DMG, demineralised enamel can be filled and reinforced without drilling or anaesthesia (Figs. 4 & 5).

One of the reasons that earlier approaches to the treatment of white spot lesions have fallen short is that fluoride therapy is not always effective in the advanced stages, and the use of restorative fillings usually sacrifices significant amounts of healthy tooth structure.

Instead of adopting a wait and see approach, Icon has been
shown to arrest the progress of early enamel lesions up to the first third of dentine in one simple procedure (Fig. 6), without unnecessary loss of healthy tooth structure.

In the procedure described here, the surface area of the white-spot lesion is eroded with a 15 % HCl gel, which opens the pore system of the lesion. This is then dried with ethanol, followed by the application of Icon onto the lesion with the application aid. The extremely high penetration coefficient enables it to penetrate into the lesion pores. Excess material is then removed, and the material is light-cured. The total treatment time should be about 15 minutes (Fig. 7).

The cosmetic treatment of cariogenic white spots in one visit can be very appealing, especially to young patients and their parents (Figs. 8a & b). No drilling or anaesthesia is required and those patients who have already demonstrated poor compliance with their brushing can be treated earlier.

I would recommend that clinicians try the Icon product when attempting to remineralise white spot lesions post-orthodontic treatment. This is not just minimally invasive dentistry; it is micro-invasive dentistry._

**Fig. 1** Typical white spots: C-shaped or irregular.

**Fig. 2** Smooth surface caries lesion.

**Fig. 3** Clinical image of an incipient caries lesion.

**Fig. 4** Clinical image of an incipient caries lesion.

**Fig. 5** Pore system of an incipient caries lesion.

**Fig. 6** The first treatment to bridge the gap between prevention and restoration.

**Fig. 7** Smooth surface procedure.

**Figs. 8a & b** Lesions before and after Icon treatment.

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givitis compared to placebo. Pagano et al (1997) and Pistorius et al (2005) in separate double blind studies demonstrated the beneficial effect of Hyaluronan gel in producing significant improvements in the measurement variables of inflammation in gingivitis.

A study by Yi Xu et al (2004) concluded that there was no clinical improvement was achieved by the adjunctive use of Hyaluronan 0.2% gel compared to mechanical debridement. However in this study Hyaluronan 0.2% gel was applied only once a week for six weeks, a total of seven applications over a six week period, compared to the recommended application level of three times daily for at least 4-8 weeks. The absence of observed clinical improvements, contrary to other published studies, may indicate that the Hyaluronan levels used in this study were well below the optimum levels required to achieve a significant clinical improvement.

Mesa Aguado et al (2001) in a double study on patients with periodontal disease concluded that Hyaluronan gel was effective in controlling inflammation and gingival bleeding and a reduction in the depth of gingival pockets was observed along with a significant reduction in epithelial and lymphocyte cell proliferation.

This study has demonstrated that the use of Hyaluronan gel statistically improves patient outcome (reflected by highly significant improvements in bleeding indices and pocket probing depths) when used as an adjunct to non-surgical periodontal therapy.

The bleeding index improved by 24.6% in the placebo group, whereas the treatment group displayed a reduction of 59.05%. This equates to a twofold improvement in outcome in the treatment group. Pocket probing depth also demonstrated a highly significantly (P<0.00267) incremental improvement in the treatment group. The test group therefore experienced a 75.75% improvement in outcome in comparison to the base-line healing rate (placebo group).

These results markedly demonstrate the additional benefits accorded by the use of Hyaluronan 0.8% gel.

Conclusions

This study confirms results, which indicate that exogenous Hyaluronan gel has a beneficial effect in the growth, development and repair of tissues in periodontal disease.

In this study it was shown that even a single subgingival application of Hyaluronan gel after non-surgical debridement results in highly significant improvements in treatment outcomes as assessed by reductions in bleeding and pocket depth measurements.

It is therefore concluded that the adjunctive use of Hyaluronan after thorough mechanical debridement potentially has major clinical benefits in terms of improved healing after non-surgical therapy. However further work needs to be done to confirm the results of this study and to assess the long term healing of the tissues in sites in which the Hyaluronan was applied.

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Figure 1: To demonstrate the additional benefit in terms of reduced bleeding achieved by application of the Hyaluronan gel after non-surgical debridement.

Figure 2: To demonstrate the additional benefit in terms of reduced pocket depth achieved by application of the Hyaluronan gel after non-surgical debridement.
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Obese women may never escape stigma

Obese women may never escape the stigma of obesity even after they have lost weight, according to researchers.

The study by the University of Hawaii, the University of Manchester, and Monash University, Melbourne, Australia examined whether anti-fat prejudice against women persisted even after they had lost significant weight and were now thin.

The researchers asked young men and women to read vignettes describing a woman who had either lost 70 pounds or had remained weight stable, and who was either currently obese or currently thin. Participants were then asked their opinions about this woman on a number of attributes.

The team found that participants in the study — published in the journal Obesity — expressed greater bias against obese people after reading about women who had lost weight than after reading about women who had remained weight stable, regardless of whether the weight-stable woman was thin or obese.

“They were surprised to find that currently thin women were viewed differently depending on their weight history,” said Dr Janet Latner, study lead at the University of Hawaii.

“Those who had been obese in the past were perceived as less attractive than those who had always been thin, despite having identical height and weight.”

One of the more disturbing findings from the study, the researchers said, was that negative attitudes towards obese people increase when participants are told that body weight is easily controllable.

Co-author, Dr Kerry O’Brien, from the University of Manchester’s School of Psychological Sciences, said: “The message we often hear from society is that weight is easily controllable, but the best science in the obesity field at the moment suggests that one’s physiology and genetics, as well as the food environment, are the really big players in one’s weight status and weight loss.”

“Weight status actually appears rather uncontrollable, regardless of one’s will-power, knowledge and dedication. Yet many people who are perceived as ‘fat’ are struggling in vain to lose weight in order to escape this painful social stigma. We need to rethink our approaches to, and views of, weight and obesity.”

Unusual uses for breast milk

UF neonatologist explains the power of ‘liquid gold’

American’s spend nearly $2 billion just on flowers each Mother’s Day, and for good reason! One of the best gifts moms can give their kids can not only help their short term but long term health.

One Florida neonatologist is breaking down the unusual and uncommon uses for one of mom’s greatest gifts.

“It is liquid gold,” says Sandra Sullivan, M.D., a neonatologist at the University of Florida in Gainesville.

A few drops in the eye or ear will work wonders in clearing up infections without the harmful side effects of antibiotics.

Next, breast milk can heal diaper rash! This is also true. It works as well as any cream on the market without risk of allergic reaction. Rub in a few drops and allow it to air dry before putting a diaper back on.

Finally can it treat skin wounds, bites, and scrapes? Yes, it’s true!

“It’s really a remarkable thing I have to say. I put breast milk on my daughter’s skin wounds,” says Sullivan.

A few drops before bandaging can prevent infection and speed the healing process. It’s solid advice for your liquid gold.

Research shows people of all ages can benefit from the healing properties of breast milk. Burn victims can use breast milk to help heal and protect their skin.

Chemo patients can use it to calm their nausea and help with digestion, after treatment.

Obese women may never escape stigma

The findings, say the authors, demonstrate that residual obesity stigma persists against individuals who have ever been obese, even when they have lost substantial amounts of weight.

Obesity stigma is so powerful and enduring that it appears to even outlast the obesity itself.
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