“Up to ten times more plaque removal”

An interview with Maha Yakob, PhD, RDH, Global Director, Professional Relations and Scientific Affairs, Philips Oral Healthcare

By Dental Tribune MEA/CAPPmea

Maha is a scientific guru for Philips Sonicare. She started as a dental hygienist many years ago in Sweden while also lecturing at the Karolinska Institute. Karolinska is well known in the industry of dentistry since it has housed many Nobel Laureates, both in physiology and medicine. Dental Tribune MEA had a chance to hear from Maha on her evidence based approach on Sonicare, the electronic toothbrush.

I was completely on the academic side when Philips approached me, and I joined them three years ago. What I implemented in the company was this whole evidence-based approach. Before I joined Philips, they had all these great studies that they had done, but they didn’t really focus as much on getting the publications to the professionals. We just assumed that once people tried Sonicare, they would love it. But then my focus shifted and I thought, let’s publish these papers and show our peers and colleagues why they should recommend Sonicare based on evidence. In that case, they are not just recommending Sonicare because they like the product. Often we would hear dentists or dental hygienists say, I know it is working because when my patients come back they have fewer splitting gingivae. They could all see the clinical results, but our approach needed to be evidence based. Patients loved the product, it was just that the scientific part was missing, which is what we see now with the Journal of Clinical Dentistry, launched at the International Dental Show, with five studies that were published in this peer-reviewed journal.

In this special issue, you will find five papers. The first two are randomised control trials looking at Sonicare versus manual toothbrushes. Two randomly assigned groups are compared after one group receives a manual toothbrush and the other, a Diamond Clean. Not surprisingly, of course, Sonicare performed significantly better in the areas of plaque removal and gingival health.

In the first study, we saw that the Philips Sonicare Airfloss Ultra high frequency sonic powered toothbrush was statistically significantly more effective than a manual toothbrush in reducing supragingival plaque, gingival inflammation and gingival bleeding.

The second study showed that the Philips Sonicare HealthyWhite Plus with the Premium Plaque Control brush head significantly reduced gingival inflammation, gingival bleeding and plaque following six weeks of home use, compared with manual toothbrushing alone. This is how we substantiated the claim, “Up to ten times more plaque removal.”

The Sonicare toothbrush has flexible sides, allowing it more coverage of a larger surface area. The objective of the third study was to evaluate the short-term clinical efficacy of high-frequency, high-amplitude sonic-powered toothbrushes compared with manual toothbrushes on plaque removal and gingivitis reduction in everyday use, through a meta-analysis of randomised controlled trials. The combined results of 8 studies with a total of 1560 subjects showed that sonic-powered toothbrushes had significantly greater plaque removal. In conclusion, high-frequency, high-amplitude sonic-powered toothbrushes decreased plaque and gingivitis more effectively than manual toothbrushes in everyday use, in studies lasting up to three months.

Of course, studies one, two and three confirm that Sonic technology is superior to the manual toothbrush. Study four is a head-to-head study done by an independent research organisation to compare the effect of the Philips Sonicare DiamondClean, used with the Premium Plaque Control brush head to the Oral-B Pro 3000 used with the CrossAction brush head on gingivitis and supragingival plaque reduction. In the results, we can see that the numbers were significantly better with the other technology.

The fifth study is moving away from simply brushing your teeth in using Airfloss as a way to go. The addition of interproximal cleaning to manual toothbrushing is statistically proven to significantly reduce gingivitis and plaque compared with manual toothbrushing alone. Among the adjacent interproximal cleaning regimens, AirflossPro provides a similar reduction in gingivitis and plaque to string floss.

The question now is: shall I change my cleaning regimens? As soon as we added the string floss or Airfloss, there was a reduction in plaque. In fact, we found eight times more plaque removal if something was used in addition to the manual toothbrush. Again, the scientific evidence suggests that Airfloss is as good as floss when you use it with a manual toothbrush and strands.

This is something we have shared with the community. We do trade shows, events and different kinds of summations of the studies. In the US, we aired a TV commercial that talks about the studies and, of course, the different conclusions.

Together with the FDI World Dental Federation, we are trying to educate and raise awareness. Partnership with the FDI’s World Oral Health Day is something of which we are very proud and it is our way of spreading the message. For me, working for a company like Philips feels like the perfect fit. It is not just a technology company, but also a health tech. Forget the lights and everything else that people associate with Philips, it is a health tech company that has everything from diagnosis to home treatment to prevention, and we are really focusing on the holistic approach so that the FDI’s World Oral Health Day is about increasing awareness of the oral systemic link. That’s why a partnership with the FDI is perfect. It increases public awareness and helps you make the smart decision about what you are using in daily care. Many people are still unaware of good oral health care, especially in this region. They still use manual toothbrushes, which means you still have plenty of work, but I think we have more to do in education.

Maha Yakob, PhD, RDH
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www.cappmea.com/dhs
Pregnant women are hardly informed about the importance of oral health

**By DTI**

A new mother herself, pregnancy gingivitis has become a subject close to Dr Anja Carina Borer’s heart. She set up a joint campaign between Oral-B and the European Federation of Periodontology (EFP), which promotes oral health during pregnancy and educates health professionals and the wider public on the issue. Originally trained as a dentist in Mainz in Germany, Anja now serves as Professional and Scientific Relations Manager Europe at Procter & Gamble in Geneva in Switzerland, where we met with her for some questions and answers on the subject. Figuring, she brought along her 4-month-old daughter, who cooed quietly in her pram throughout the interview.

**Oral-B and the EFP have touched upon a very important and personal topic, in that periodontal disease could affect the developing baby.**

**Dr Anja Carina Borer:** Yes. Gingivitis is a well-known side-effect during pregnancy and the latest data shows that practically every pregnant woman suffers from it. The number of bleeding sites is about three times higher in pregnant women than in the average adult. Even I, a dentist equipped with more than enough scientifically sound Oral-B products, experienced some gingival bleeding for the first time in my life!

As we know, untreated gingivitis can lead to periodontitis, the inflammatory burden of which can negatively impact pregnancy. Although more consistent in-depth studies are necessary, periodontitis during pregnancy has already been linked with premature birth, low birthweight and pre-eclampsia. This topic is important as most pregnant women are not aware of this problem and therefore often do not recognize the warning signs of gum problems such as bleeding or sensitive gums. With our campaign, we want to inform women and make sure they take good care of their oral health and seek a dental professional in order to prevent possible oral health problems and pregnancy complications.

**How can periodontitis lead to these complications?**

Clinical studies suggest that bacteria from the oral cavity —specific micro-organisms associated with periodontitis—colonise the foetus and the placenta, with blood as the most likely vehicle of transmission. As a consequence, the presence of periodontal bacteria in the foetal-placental unit may activate a local immune or inflammatory response that might negatively affect the pregnancy.

**Biologically, that makes perfect sense, but how widely accepted is this point of view?**

Although clinical research on the matter has existed for years, it is still a fairly neglected topic. Not only does it not receive enough attention from dental professionals, it is also largely overseen by healthcare professionals such as gynaecologists and midwives. When I was pregnant, I was warned about many potential risks, ranging from flying to eating sushi or dying my hair! I did enough research on the aforementioned “risks” to conclude that there is no scientific data to support these. However, no one—my gynaecologist included—told me to go and see a dental professional or take care of my oral health.

To me, this really is a very personal matter, as I fell pregnant while establishing the cooperation concerning pregnancy gingivitis with the EFP. I find it worrying that pregnant women are hardly ever informed about the importance of good oral health during pregnancy. Therefore, I was passionate about establishing the Oral-B/EFP cooperation and lead the joint campaign. Our aim is to better educate dental professionals and medical professionals in general, as well as the wider public, on the importance of good oral health during pregnancy.

**Could you explain the changes in the bodies of pregnant women that cause pregnancy gingivitis?**

The biggest hormonal changes in a woman’s life take place during pregnancy. It is a period of great change and obviously the mouth is one of the main areas affected by such changes, which in itself can lead to gingivitis.

It is not for nothing that people used to say that women gain a child and lose a tooth. During pregnancy, there is a 50 times increase in oestrogen compared with the amount during a normal menstrual cycle. This and the increase of progesterone and other hormones lead to an increased vascular permeability of gingival tissues, which promotes gingival inflammation in the presence of dental plaque. For women who have already developed periodontitis, the situation usually gets worse because of the changed hormonal situation.

**Apart from cardiovascular disease, periodontal disease is known complication of diabetes. What is the risk of pregnant women with diabetes developing periodontitis?**

For women who already have diabetes, the biggest challenge is to keep their blood sugar under control. Independent from this, a small percentage of women develop diabetes during pregnancy. Although this type of diabetes disappears after pregnancy, these women need treatment in order to avoid serious complications. Both groups, however, have a higher risk of developing periodontal disease. It is important to note that treatment is more likely to succeed if a person’s blood sugar levels are under control. Vice versa, periodontal disease also negatively impacts diabetes. Overall, it is important that women with diabetes take care of their oral health before and during pregnancy.

**How do you integrate all of your findings in your Oral-B seminars?**

Oral-B’s mission is to promote oral health and work closely with dental professionals to ensure optimal home care. Our collaboration with the EFP serves as a way to raise awareness about all matters concerning oral health during pregnancy. Our educational activities such as the Up-to-Date events are a way to communicate this and support dental professionals in their objective to improve oral health. We believe a healthy mouth is part of a healthy body and promoting good oral health during pregnancy is one way to help to achieve this.

**How can general dental practitioners, periodontists and dental hygienists integrate this last thought into their daily practice?**

It is important that they understand the connection between oral and general health, be it the link between periodontitis and diabetes, as well as cardiovascular disease, or complications during pregnancy. Gynaecologists, cardiologists and endocrinologists too should be aware of this connection. That being said, many women avoid professional dental care during pregnancy and, conversely, many dental professionals are insecure about treating pregnant patients. However, female patients of child-bearing age should be informed about the importance of oral health during pregnancy.

This is especially important for patients who suffer from periodontitis. These patients should be encouraged by dental professionals to undergo treatment before pregnancy. During pregnancy, non-surgical periodontal therapy has been considered safe in the second trimester.

**Finally, which would your tips be for pregnant women?**

Women who have periodontitis must seek treatment before pregnancy, whereas women who enjoy good oral health should go and see a dentist or a dental hygienist in the second trimester for a dental cleaning. Of course, they should brush their teeth twice a day with a fluoride-containing toothpaste—even better is an antibacterial toothpaste containing stannous fluoride—and clean their teeth interdentally. It is scientifically proven that electric brushes such as our Genius toothbrush are particularly good for reducing plaque and gingival bleeding. Moreover, they are a practical solution for women who have less time to brush their teeth. There is no question that all mothers with a baby will know exactly what I am talking about.
Preservation of root cementum: A comparative evaluation of power-driven versus hand instruments

By Bozbay E, Dornini F, Colboget A, Cingi S, Guida L, Aydin MS, Mariotti A, Piliioni A, Italy

Background
Grencik et al suggested that cementum plays an important regulatory role in periodontal regeneration. One of the major goals of periodontal treatment is the removal of pathogenic micro-organisms by scaling and root planning. In the past the misconception was to obtain a root surface with smooth and hard surface characteristics that was free of endotoxins which resulted in the removal of the subgingival plaque and calculus deposits, and the removal of all or most of the cementum. Recent studies have reported that endotoxins were not located within the cementum that was present traumatically and analyzed with a dissecting microscope.

Results
- Remaining cementum:
  - Percentage of coronal cementum remaining following subgingival instrumentation was 88% for U, 80% for U + AP, 93% for AP and 65% for HC.
  - The amount of retained cementum with AP was significantly greater than with HC SEM.
- Smallest root surfaces were produced by the HC followed by the AP.

Conclusions
- Air polishing was significantly more effective and superior in preserving cementum.
- Hand instrumentation using curettes was most effective in removing cementum in comparison to ultrasonic or hand instruments.

Ultrasonics with new shaped tips and subgingival air polishing devices has been developed for removal of root accretions with minimal root damage. Air polishing has been suggested as a treatment modality for root debridement resulting in probing depth reductions and removal of subgingival biofilm. No scientific evidence exists today showing the loss of root substance or surface roughness produced by either ultrasonics or Air polishing.

Aim
To assess the amount of cementum remaining following in vivo root instrumentation as well as the surface characteristics of the retained cementum.

Material and Methods
- 48 caries free, single-rooted teeth in 27 patients diagnosed with severe chronic periodontitis with periodontal probing depth (PDP) ≥ 5 mm in at least two sites per tooth with radiographic loss of more than two-thirds of root length and scheduled for extraction were included in the study.
- Teeth were randomly divided into four treatment groups. Instrumentations were performed with medium power settings.

1. Piezoelectric ultrasonic scaler - (Air-Flow Master Piezon, Instrument Tip PS, EMS SAU)
3. Air polishing with the glycine powder (AirFlow Powder Perio, Perio-Flow Nozzles, EMS SAU) - U + AP
4. Hand instruments (Gürey curettes 5/6, 11/12, 15/14 American Eagle, Miossoula, MT, USA) - HC

Treatment
- One apical root surface of each tooth was randomly subjected to debridement, and the other apical proximal surface was used as control.
- Following instrumentation, the teeth were immediately extracted and analyzed with a dissecting microscope.
- Remaining calculus, root surface roughness and loss of root substance were evaluated along with scratches, gouges, cracks, and any other changes in the cementum that was present were noted.

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Editorial Note: The article was originally published in International Journal of Dental Hygiene.

08 September 2016, page 18
Periodontal disease may be key initiator of rheumatoid arthritis

By DTI

AMSTERDAM, Netherlands: In recent years, increasing attention has been given to aspects of oral health in patients with rheumatoid arthritis (RA), especially related to associations with periodontal disease. The results of a study conducted at the University of Leeds in the UK, and recently presented at the Annual European Congress of Rheumatology (EULAR 2018) in Amsterdam, demonstrated increased levels of periodontal disease and disease-causing bacteria in individuals at risk of RA.

The study found that the prevalence of periodontal disease was increased in patients with RA and could be a key initiator of RA-related autoimmunity. This is because autoimmunity in RA is characterised by an antibody response to citrullinated proteins in which the amino acid arginine has been converted into citrulline, altering the proteins' structure. The oral bacteria Porphyromonas gingivalis is the only human pathogen known to express an enzyme that can generate citrullinated proteins.

The study included 48 at-risk individuals (positive test for anti-citrullinated protein antibodies), 26 patients with RA and 52 healthy controls. The three groups were balanced regarding age, sex and smoking.

"It has been shown that RA-associated antibodies, such as anti-citrullinated protein antibodies, are present well before any evidence of joint disease. This suggests they originate from a site outside of the joints," said study author Dr Kulveer Mankia, clinical research fellow at the University's Institute of Rheumatic and Musculoskeletal Medicine. "Our study is the first to describe clinical periodontal disease and the relative abundance of periodontal bacteria in these at-risk individuals. Our results support the hypothesis that local inflammation at mucosal surfaces, such as the gums in this case, may provide the primary trigger for the systemic autoimmunity seen in RA."

"We welcome these data in presenting concepts that may enhance clinical understanding of the key initiators of rheumatoid arthritis," said Prof Robert Landewé, Chairperson of the EULAR 2018 Scientific Programme Committee. "This is an essential step towards the ultimate goal of disease prevention."

The study abstract is titled "An increased prevalence of periodontal disease, Porphyromonas gingivalis and Aggregatibacter actinomycetemcomitans in anti-CCP positive individuals at risk of inflammatory arthritis."

By DTI

Patient motivation techniques

When it comes to motivating patients to maintain good oral hygiene practices, a clear plan is essential given the time constraints of most dental appointments. What this plan entails, however, depends on what the most pressing issues to the patient are and how she structures her oral hygiene appointments and the importance of building relationships with patients.

Ms Basheda, how did you first get started as a dental hygienist at M & N Dental Practice?

Sandy Basheda: I’ve been working at M & N Dental Practice for three years now. I started basically straight after I graduated from the University of Liverpool with a degree in dental hygiene and therapy. Prior to that, I had a background in dental nursing, but I wanted more of an instrumental role with dental patients, which led me to hygiene and therapy.

What does your average day at work involve, and what is the structure of your oral hygiene appointments?

I see many patients with periodontal problems and so conduct a lot more hygiene right now than therapy. I also deal with a lot of children that, unfortunately, have dental caries due to a poor diet, lack of oral hygiene and likely a lack of education on how to prevent it. It’s not a good start for children if they have to have fillings put in or even have their teeth pulled if it’s particularly bad— it doesn’t give them a good first impression of the dentist.

Each oral hygiene appointment is scheduled for half an hour and begins with a discussion about the patient’s existing problems and current oral hygiene routine. I then explain to the patient what the purpose of the appointment is and what it will entail and conduct an assessment of his or her oral health. Every patient is different, so it really depends on what he or she needs addressed as to how the appointment will proceed from there.

How can you get patients to continue with good oral hygiene practices after an appointment?

I think one has to build a relationship with them. They have to trust one and understand what the benefits of oral hygiene are, as they might not be aware that they have any problems in the first place. For example, if smokers aren’t experiencing any beneficial effects, you can’t really expect them to think that there’s anything to worry about. One needs to be able to explain to them in a clear and understandable way why taking care of their teeth is important not just for their oral health but their overall health too.

Is it possible to achieve this within half an hour? Well, it’s not a lot of time, but we can always schedule an hour-long appointment if it is necessary. I see many anxious patients, who might not have been to the dentist in ten to 15 years. With these patients, a shorter appointment is often good in the beginning, because it means that they’re not overwhelmed and that one can build up from there over the ensuing sessions. By the second or third appointment, they’re a bit more relaxed and easier for treatment.

How do you motivate your patients to take charge of their own oral hygiene?

I think it’s mostly about re-educating patients on what the correct and most effective cleaning methods are, what products are best for them. It’s about finding something that works for the patient, something that will get him or her excited about taking care of his or her teeth and seeing the benefits. In dentistry, it can be difficult to engage in a cooperative relationship with one’s patients—often, it’s a one-way conversation with the professional giving the patient instructions or advice on how to take care of him or herself. I like to leave that sort of instructional conversation to the beginning or the end of the appointment, as this allows the patient to think, while in the chair, whether he or she has any questions about what has been said. I’ve found that any future appointments will entail being able to answer those questions in a clear and understandable way is essential to motivating patients.

Thank you very much for the interview.

By Curaden

For effective oral care, it is very important to use a toothbrush with soft bristles. The reason for this is that hard bristles can often damage teeth and gums. This is a negative side-effect that occurs if too much pressure is used while brushing.

Curaden’s toothbrushes have one special feature in particular: they are incredibly soft. The 5460 CURAPROX® filaments of the CS 5460 ultra soft form an extraordinarily dense and efficient cleaning surface. The bristles are stiffer than Nylon and remain just as stable in the mouth as they are when dry. These properties make it possible to manufacture toothbrushes with many very fine bristles. Soft on the gums and teeth, the CURAPROX® filaments are extremely tough on plaque. Anyone who has tested the cleaning power of a CS toothbrush will never want any other brushing experience.

An ideal toothbrush head is small and slightly angled to make it easy to reach those crucial areas. The bristles should be fine enough to clean the teeth and gums softly and thoroughly. The handle should make it possible to properly position the toothbrush at about a 45-degree angle, always half on the gums and half on the teeth. The gumline is just as important as the teeth.

The CS 5460 ultra soft combines these exact standards of design and function. The small, efficient head at the proper angle ensures that your patients reach those crucial areas. An eight-sided handle optimises the perfect contact angle on the teeth and gums for optimal cleaning. The large cleaning surface with incredibly fine, rounded filaments ensures soft and efficient brushing of the teeth and gums.

The cleaning efficiency of the bristles is tightly packed into 99 holes. Combined with the lively colours of the CS 5460 ultra soft, it makes for one of the most popular CURAPROX® products. The toothbrush is also available with the CPS Prime interdental brush. The CS 5460 ultra soft offers the perfect choice for everyone.

Visit the website to learn more about our products: www.curaprox.com/en
A soft approach for tough areas.

Enamel is hard. Harder than steel, even. And it should stay that way. Enamel-friendly brushing means: pampering your teeth and gums with tender loving care. Like with the gentle CS 5460 ultra soft. Mmmm, let’s do that again.
By DTI

Dr Eric Thevissen, I wanted to talk to a dental hygienist in Belgium. Why is that not yet possible?

Dr Eric Thevissen: Well, the good news is that, from June 2019 on, it will be possible to visit and talk to a dental hygienist in Flanders. Why Flanders has waited such a long time to start the education and training of dental hygienists is politically motivated and due, in large part, to the representative dental associations. Belgium has a long tradition of one-dentist clinics, often working without dental assistants. Since the introduction of a quite difficult admission exam for dentistry in 1997, the discipline has attracted fewer students. As a consequence, the number of graduating students has dramatically decreased while the demand for dental care is continually increasing. Slowly, but surely, more and more group practices have emerged, hiring dental assistants. Back in 2006, the first meetings were organised between universities and dental societies about the qualifications needed to become a dental hygienist and the tasks that could be delegated to them. As always, there were proponents and opponents, and it took a very long time before all stakeholders agreed on the conditions and criteria needed to start dental hygienist training in Leuven and Ghent.

Let’s talk about your study “The provision of oral hygiene instructions and patient motivation in a dental care system without dental hygienists”. Please tell us more about it. Thirty years ago, I started working as a periodontist in Hasselt with another colleague. Since we were the first periodontists in this province, we had a flying start. After a few years, I noticed that dentists were always referring patients to our clinic with the same complaints, such as bleeding gingivae or bad oral hygiene. In my opinion, treating bleeding gingivae or giving oral hygiene instructions is the duty of every dentist and belongs in the sphere of primary dental care rather than in secondary or specialist care. Although we organised courses where a general dental practitioner (GDP) could learn about patient interaction and guidance, I realised that we were considered by a large number of GDPs to be dental hygienists rather than periodontists. The truth was that we were both, periodontists and dental hygienists. This annoyed me because I knew that in neighbouring countries periodontists could spend their precious time on the work they were trained for.

In 2004, I took the initiative to set up a pilot study in Limburg with 65 GDPs in the province. We used the Dutch Periodontal Screening Index, a screening test for periodontal status that had been introduced in the Netherlands a few years earlier. We collected data from 841 patients. The results clearly showed: The screened age groups had, on the whole, periodontal problems and that there was a high need for treatment. Around the same time, Prof Hugo De Bruyn joined the teaching staff of Ghent University’s Department of Dental Sciences. Probably thanks to my publication, he asked me to become one of his staff members. Working with Prof De Bruyn, one is quickly involved in clinical research and is soon trying to investigate, in depth, the questions that had bothered me ever since I started my career. One of these questions was the kind of oral hygiene instructions GDPs provide to their patients.

Using questionnaire responses of 76 dental professionals gathered for various postgraduate courses in Flanders, we were able to determine that, given the absence of dental hygienists in Belgium, oral health instructions and patient motivation appeared to be non-compliant with international guidelines. Though dental professionals were concerned with prevention, there were several mitigating factors working against them delivering this adequately.

The study mentioned lack of time, remuneration and patient interest as complicating factors for the provision of preventive care. However, qualifications, work experience, place and time are crucial for providing oral hygiene instructions and patient motivation. Can dental hygienists be seen as a solution to these problems? It is my conviction that dental hygienists are the solution to these complicating factors. Prophylactic care will be the main target of their work, since dentists are primarily trained for restorative care. Owing to factors such as the decreasing number of graduating dental students, the increasing number of retiring dentists in the next ten years, an ageing population and a higher demand for preventive care, the stress of work increases and forces dentists to manage their work time more strictly. Of course, GDPs prefer retributive and other more rewarding treatments. We all know how time-consuming patient motivation techniques for behaviour change can be. There is not even prepared to spend that time on preventative care. Generally speaking, dentists are used to giving a basic package of information on oral hygiene to every patient and, depending on compliance, they may want to spend more time on patient guidance. Here, dental hygienists can make the difference. They will be trained to insist on the importance of behavioural change and will take the time to explain and show how to perform proper home oral care.

You have also published studies on implants, such as on implant design. What made you publish your study titled “Attitude of dental hygienists, general practitioners and periodon-

tists towards preventive oral care: An exploratory study”? You could have just continued with your research on implant systems. Indeed, the team around Prof De Bruyn is very driven by and focused on implant therapy. The study mentioned lack of treatment approachable or acceptable. Unfortunately, waiting for this trigger often leads to the loss of the tooth instead of its repair.

From the patients’ point of view, I am convinced that some of them insist on not being treated for things they do not complain about, as they see these treatments as unnecessary. If I personally have to undergo an annual medical check-up, I would hope that all the exams needed are performed, as this will set me at ease. Why then does this application not apply to oral health?

What are some of the oral hygiene instructions and patient motivational actions that you recommend for healthcare professionals? Thanks to research and clinical findings, lifestyle habits, genetics, stress, nutrition and different systemic factors have been shown to accelerate the development of periodontal disease. It is my experience that the Department of Dental Sciences at Ghent University published around 40 scientific articles in 2016, the majority of which are related to implant therapy. The subject of my PhD is not implant-related, but deals with different relationships in dentistry: between the patient and the dental professional, and between primary and secondary dental care, that is between GDPs and specialists.

What were the objectives and results of this study? This second study was a step further than the first one. In the first study, we looked for an explanation for the differences in patient motivation techniques between Flemish GDPs and periodontists. In this second one, we compared our rather unique Belgian system with the Dutch system, a completely differently structured healthcare system including dental hygienists. We wanted to see how the Dutch system represented the gold standard and how we were situated in Flanders.

The results showed that periodontists and dental hygienists shared more common viewpoints than GDPs and dental hygienists did. What was remarkable was the fact that more than 80 per cent of periodontists and dental hygienists were satis-

fied with their efforts in informing patients, compared with 38 per cent of GDPs. Secondly, whereas GDPs indicated nurture as the factor most contributing to the oral hygiene level of the patient, periodontists and dental hygienists focused on the information of the dental practitioner and a patient-centred approach. In our multivariate analysis, the presence of chairside assistants seemed to be of major importance.

But, as always in questionnaire-based studies, the results can be biased by socially desirable answers and by the inevitable structural differences between Flanders and the Netherlands. One of these differences, for example, is the fact that providing oral hygiene instructions is not reimbursed in the Belgian dental care system, whereas it is considered an autonomous activity.

What should the role of the dental practitioner in the successful treatment of periodontal disease be? What does the patient need to do?

The role of the dental practitioner, in particular the GDP, undoubtedly remains to keep a panoramic over-

sight over everything that has to do with the dental and oral health of the patient. Especially considering the importance of dental hygienists in the near future in Belgium, the den-

tal role of a supervising manager is hygiene, medication, age, nutrition and possible progressive problems often remain unimproved until complications or even complete loss of teeth. This seems to be needed to make the idea of treatment approachable or ac-

ceptable. Unfortunately, waiting for this trigger often leads to the loss of the tooth instead of its repair.

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What should the role of the dental practitioner in the successful treatment of
counselling. One needs two or three control sessions to check his or her dexterity and oral cleaning performance. Plaque disclosure remains a confronting but very effective tool to show the results of the patient’s cleaning habits.

Finally, the dental professional should show enthusiasm and keep on repeating until there are visible improvements.

From your point of view, does the dentist spend enough time on the diagnosis of a disease? Of course, dentists are dutiful people who are concerned with their jobs. Spending time in our efforts is a core business. Examining patients means exploring and looking for stubbornly hidden troubles or discomforts.

The next question is the most important one: is this problem acute enough that it should be treated immediately, in the very near future, or can we wait and see how it develops? This is risk management and it is dependent on multiple factors.

Often, prevention is neglected in dental practices in favour of diagnosis and restorative treatment. How can dental professionals implement prophylaxis in their daily practice, especially primary prophylaxis? I would say, rather, that prevention is not neglected. Sixty-five per cent of GDPs provide information about oral hygiene as a standard procedure. Depending on compliance, the GDP may decide to spend more time on patient guidance. This requires dependability from the patient’s face how motivated he or she is, not what he or she is interested in. This is not often asked of the patient, so one could rather say there is not enough time spent on communication.

I invite practitioners to do an experiment in their waiting rooms. While they are at work, they can give a short questionnaire asking him or her to write down in a few words how they perceive their dental care. How do they rate their overall satisfaction with their personal dental care? They can then be asked if they would be interested to know more about it. We use this method in our clinic. In the waiting room, patients have time to reflect and one might be surprised at how interested patients really are if one gives them the opportunity to communicate and to prepare their questions in advance.

To be honest, I think that primary prophylaxis is impossible to achieve because we do not control all the influencing factors, of which some can be health or patient-related. It means that we need to try to prevent people from developing caries or periodontal disease. This is somewhat futile, since caries and periodontal disease are the most widespread infectious diseases present in almost every patient. Twenty-five per cent of 5-year-old children have bleeding gingivae, and this figure rises to 55 per cent for 15-year-olds.

Primary prevention is like placing speed cameras on highways. It covers all the time and for speed cameras and other regulations, but prevents nobody from being harmed and being the number of persons killed by traffic every year is diminishing. This is primary prevention. However, I strongly believe in secondary prevention, it is the dentist’s duty to examine and to intervene, prevent and to treat dental diseases before it requires medical treatment.

How important are home care and high-quality oral hygiene products such as CURAPROX?

It is a fact that oral hygiene devices are not considered as pharmaceuticals and therefore they don’t have to be thoroughly tested. If a company designs a nice, good-looking toothbrush, it is allowed to produce it and sell it, even if the brush does not meet the criteria desired in an effective toothbrush.

Comparing the oral hygiene products from different companies, we see a variety of designs and features. This is interesting because there is no such thing as the perfect interdental brush. There are always compromises to make and what some patients like, may be rejected or disapproved of by others. We as dentists have only an advisory, consultative role.

Nevertheless, CURAPROX makes dental care products designed by dental professionals, and the company is willing to listen to advice on how to improve its products.

What is the status of dental hygiene in Belgium? In other words, how does the Belgian mouth look?

When I go abroad to congresses and meet with peers, I feel their disappointment. Dentistry is considered to be an important profession in many countries. In Belgium, the first thing I am asked is, “How can you treat periodontal disease without a hygiene intervention? For them, it is like having bars and pubs, no beer.

I have read some articles in which the decayed, missing and filled teeth and decayed, missing and filled surfaces of children are compared between different European countries. Though Belgium was not one of the countries, it was not at the bottom either. In articles from the US, it is reported that, at 30 years of age, 25 per cent of the American population have mild periodontitis, 60 per cent have chronic periodontitis and 25 per cent have aggressive periodontitis. This is exactly the same breakdown as in Europe. The question is not about whether dental hygienists are necessary, the question is, what percentage of the population do dentists reach and can afford to go to a dentist on a regular basis? Despite all this, we are able to manage the periodontal situation in Belgium and this was one of the reasons for the second study.

Does the addition of dental hygienists make financial sense or does prophylaxis make financial sense for the dental practice if the practice already makes good money with implants?

I understand your point of view that, in the perfect world of prophylaxis, dental implants have no place because everything should be done to prevent implant treatment.

I remember Prof. Jan Lindhe saying that, nowadays, there are many treatable teeth and extractions might be replaced by dental implants. As a periodontist I agree with Prof. Lindhe, a dental implant is an effective instrument to rehabilitate edentulous areas, but only after all other options have been considered. But often life decides differently, and at Ghent University I see a lot of patients seeking dental care because of, for example, fracture of one or more of the front teeth owing to biking and other kinds of accidents, sometimes under the influence of alcohol or drugs. These students don’t want to wear removable dentures for life.

With respect to the first part of the question, of course the addition of dental hygienists makes financial sense. The purpose is to relieve dentists of those tasks that can be delegated or that do not require a highly skilled dental hygienist will be trained to communicate with patients about their specific dental situation. Delegating prophylactic care to the dental hygienist implies that more patients can be treated and followed up. We also must not forget patients who live in nursing homes. Since nurses are not allowed to provide dental treatment, we are glad that, in the near future, dental hygienists will be available to give these people the necessary preventive care.

What kind of prophylaxis does the Belgian dentist perform in the office? How much time do you devote to prophylaxis?

When looking at your Dutch neighbours, what do you think should be replicated in Belgium?

In the Netherlands, they have more than 50 years of experience with dental hygienists. This profession is well represented and has a strong, hardworking and lobbying society. We in Belgium have always respected and admired the pioneering way of organising dental care in the Netherlands. Although tough discussions have had to be conducted, they have always reached a consensus. Today, in Belgium, up to ten different levels of dental professionals are distinguished, from specialists to dental assistants. I don’t think we will ever see this development in Belgium.

The advantage of us being behind is that we can copy the best things that have proven to be solid and to work, and delay the more complex or risky things until we see how it works out. In Belgium, the dental hygienists will integrate easily into the dental workforce and that their future will be as bright as it is in the Netherlands.

Finally, where do you see the future of Belgian dentistry?

UC Leuven-Limburg and Artevelde University College (in Ghent) are offering a new professional bachelor’s degree programme in dental hygiene. Is that a breakthrough?

Certainly is it a pity that this programme is not yet offered in the French-speaking part of Belgium. Let’s hope they will follow with us as soon as possible to ensure the levelling of our nation’s dental care.

Since Leuven and Ghent are the only Flemish universities where the dental graduate curriculum can be followed, it is logical that dental hygienists will be trained at those same universities, and that both professional groups will start to work together at chairside from transevelar on wards.

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Another rather regrettable observation is the fact that stock-market listed companies invest in dental braces and hire dentists as employees. Of course, this is a sign of the times. Being the manager of a group clinic today has turned into a full-time job that has almost nothing to do with dentistry. Let’s hope that the financial management of these clinics is not more important than the patients and that the dentists who are working in the system still feel the same responsibility towards their patients.

Thank you very much for the interview.
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