A question of radiation

It has been reported that our exposure to radiation is seven times higher than it was in the 1980s. Much of this radiation exposure comes from CT scans, X-rays and various other forms of medical imaging, including exposure during dental check-ups.

However, with the development of new methods and practices throughout the dental industry patients are being exposed to levels of radiation.

One report quoted Erika Muhlebach, DDS, MSc, a principal assistant professor in the department of periodontics and oral medicine at the University of Michigan, School of Dentistry: “It’s in line with, or even more advanced than other fields of medicine,” Erika said.

However, the problem seems to be that dentists don’t seem to be investing in all these new low-radiation methods.

Both the American Dental Association and the Food and Drug Administration have issued guidelines for how often adults and children should be getting X-rays and as recent reports have highlighted, healthy adults without many risk factors only need a dental X-ray every three years.

The ADA recommends that a thyroid collar be used on everyone, but specifically on women of childbearing age, pregnant women, and children, because studies have shown that repeated dental X-rays can increase your risk for thyroid cancer.

Soft drinks don’t degrade orthodontic wires

According to a new study in Acta Odontologica Scandinavica, researchers have said that sugared soft drinks and juices do not appear to degrade the physical and chemical properties of nickel titanium orthodontic wires.

According to a recent report, researchers from the University of Bologna evaluated the effect of Coca Cola, orange juice, and Gatorade on the Young’s modulus, hardness, surface topography, and chemical composition of nickel-titanium-based orthodontic wires.

The report stated that “the researchers cut 32 specimens (20 mm in length) from the straight portion of preformed 0.019 x 0.025-inch nickel heat-activated archwires and randomly divided into four groups of eight specimens each: Group A1 (Coca Cola regular), Group A2 (Santal orange juice), Group A3 (Gatorade), and Group B (distilled, deionized water). Each specimen was immersed in 10 ml of one of the soft drinks or the control for 60 minutes at 57°C.

The study concluded that there were no significant differences between the groups either in the Young’s modulus or hardness after the selective soaking protocol.

A cirrusy drink that uses only natural sweeteners, including xylitol, which studies have shown fights caries, and it also reportedly has zero calories.

With recent feedback being positive, Dr Bui told reporters that he hopes to sell the new drink in local grocery stores and dental offices, especially those that have lately taken to offering refreshments.

Tooth-friendly soda

An Arizona endodontist has come up with an idea for a tooth-friendly, all-natural fizzy soft drink.

The drink, which is called Kuri, is currently undergoing the final touches by Dr Tung Bui and a student from the University of Arizona, Alex Deo.

According to reports, the prototype they have created is a citrusy drink that uses only natural sweeteners, including xylitol, which studies have shown fights caries, and it also reportedly has zero calories.

With recent feedback being positive, Dr Bui told reporters that he hopes to sell the new drink in local grocery stores and dental offices, especially those that have lately taken to offering refreshments.
Editorial comment

Well here we are! No sooner do we get a hugely successful Clinical Innovations Conference under our belts then we have BDA to contend with! This week will see more than 3,000 dental professionals descend on Manchester’s Central Convention Complex to hear leading speakers on a variety of topics, ranging from clinical to political and everything in between.

The big news is of course the appearance at the event of the Secretary of State for Health, the Rt Hon Andrew Lansley CBE, who will be delivering a speech and is also scheduled to participate in a question and answer session after his address. With the monumental reforms going on in the healthcare sector, and the changes more specifically happening in the dental sector, this really is a great chance to grill the Minister over his thoughts about dentistry and its place in the wider NHS. I’m looking forward to it...

Mum’s gum disease treatment safe for baby

According to a new study published in the Official Journal of the American Academy of Paediatrics, pregnant women can safely be treated for gum infections without having to worry about their baby’s health.

There has been widespread concern among dentists that treating the problem could cause bacteria to get into the mothers’ bloodstream, which in turn could harm the babies’ development.

Gum disease is a particular problem during pregnancy because hormonal changes appear to make a pregnant woman more susceptible to developing it; however, the standard antibiotic-based therapy is not recommended because it stains the baby’s teeth.

What’s more, dentists have shied away from aggressive teeth-cleaning, which is also effective, out of fears they’d help the bacteria get into the bloodstream. In principle, that could harm the brain development of the foetus.

However, according to the new study these fears are baseless.

Michalowicz, a dentist at the University of Minnesota School of Dentistry in Minneapolis, and his colleagues tested more than 400 two-year-olds, who’d been born to mothers with gum disease.

Half the mothers had been treated with aggressive teeth-cleaning during pregnancy, while the rest had not.

The researchers found that the children did just as well on language, motor and mental tests regardless of whether their mothers had been treated.

The BDA event is also the perfect place to sign up for our upcoming specialist titles coming to the UK: Implants, Roots and Cosmetic Dentistry. For a special price of just £50, these titles can be sent to your practice, keeping everyone up to date with the latest in implants, endodontics and cosmetic techniques. For more information call 020 7400 8969 or come see us on Stand A21.

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Scientists declare CUS an autoimmune disease

Due to its unique resistance to standard medication, like corticosteroids, successful treatment of CUS has been achieved only in some cases through hydroxychloroquine, a prescription drug primarily used to prevent malaria as well as to treat rheumatoid arthritis or lupus. By better understanding the mechanisms linking the autoimmune response to ulcerative sores, new treatment approaches could be developed to manage the condition, the scientists said.

Bruxism week raises £500 for Help4Heroes

So far, CUS has been found primarily in middle-aged Caucasian women. It can only be diagnosed by surgical biopsy using immunofluorescence microscopic examination in an outside lab. In normal clinical settings it can be taken for oral erosive lichen planus, another more common chronic condition affecting mucosal surfaces and also considered to be an autoimmune disease.

Dentistry in a decade

The BDTA is looking for its third and fourth year BDS students to write an article for publication in the dental press, online and potentially the wider media.

The general outline will focus on the following areas:

- Dentistry in a decade
- Temp registration consultation
- Complimentary seminars at Showcase 2011
- Temporal registration consultation

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Pupils defy dental checks

A recent report has revealed that thousands of primary school children in Scotland are missing out on routine dental checks.

The blame has been handed to parents who are failing to give permission for the examinations and also to those pupils who refuse to open their mouths for the dentist; as a result, targets to inspect the teeth of all five and 11-year-olds are being missed.

Even though experts have stated that rates of tooth decay among young people are at their lowest levels ever, the report has shown that four health boards, including Greater Glasgow and Clyde and Lanarkshire, are behind the rest of the country with regards to their dental health.

Andrew Lamb, national director for professional body the British Dental Association in Scotland, said a gulf had opened between the dental health of children from affluent families and those from poorer homes and this was why some regions were lagging behind.

An action plan for improving oral health in Scotland was published in 2005 and the new report, published by the NHS, tracks progress against its goals. According to the report across Scotland nearly 64 per cent of 11-year-olds are decay free, beating the 60 per cent goal.

One report stated that the Childsmile campaign, which introduced daily tooth brushing to nursery schools across the country and primary schools in the most deprived areas, is thought to have contributed significantly to this success.

However, there according to reports there still remains a problem with gaining access to an NHS dentist in Scotland. This was a serious problem in some regions in the past, and although this has improved since the dental action plan was introduced, NHS Grampian, where there has long been a shortage of NHS provision, and NHS Dumfries and Galloway, are still failing to hit the target ratio of one dentist per 1,750 people.

One report stated that incentives to attract dentists to barren spots have been offered during the last five years and Mr Lamb said they had worked in many places.

Taking the fear out of local anaesthesia

Researchers at the Universidade of Uberaba in Brazil have come up with a simple solution to solving needle anxieties in children; The Angelus Alligator disposable syringe cover.

Hiding needles from children is often a difficult thing to achieve, and if not done well can lead to stressful and often unsuccessful experience. However, the effectiveness of the Angelus Alligator was presented during a poster session at the recent International Association for Dental Research (IADR) meeting in San Diego along with some accompanying clinical data.

One report stated that according to Maria Angélica Hueb de Menezes Oliveira, DDS, a professor in the department of pediatric dentistry at the university's dental school, the only thing a child will see prior to receiving local anaesthesia is a cartoon-looking device made of flexible rubber that fits over the needle and syringe, hiding them from young patients' eyes.

“Our experience with children who were undergoing treatment at the Children’s Clinic: School of Dentistry revealed that the patients were more cooperative due to less stress and fear, as they did not even realize that they were having an injection, she told reporters. “So the patient-professional relationship was more harmonious during the appointment.”

According to reports Dr Hueb originally came up with the idea during a conversation with her brother Fernando, who is also a dentist and a professor at the Universidade of Uberaba.

Tyrannosaurus toothache

A study that was conducted at the University of Toronto, Mississauga, has revealed an infection in a jaw of ancient fossil.

The reptile, that lived 275 million years ago in what is now Oklahoma, has started giving paleontologists a glimpse of the oldest known toothache.

Throughout the study, which has been led by Professor Robert Reisz, the chair of the Department of Biology at the University of TorontoMississauga, scientists have found evidence of bone damage due to oral infection in Paleozoic reptiles as they adapted to living on land.

Their findings, published online in the journal Naturwissenschaften - The Nature of Science, predate the previous record for oral and dental disease in a terrestrial vertebrate by nearly 200 million years.

After investigating several well-preserved jaws of the 275-million-year-old terrestrial reptile Laphidosaurus hamatus, who originated in North America, one of the specimens stood out due to its missing teeth and what appeared to be bone erosion of the jaw. After subjecting the fossil to a CT scan the researchers found evidence of an infection, which had resulted in bone destruction of the jaw, tooth loss and an internal loss of bone tissue.

As the reptiles adapted to life on land many of them evolved to have special cranial and dental developments so they could feed more efficiently to feed on both animals and plants. Some changes meant that animals no longer replaced their teeth as they became strongly attached to the jaw. This was clearly advantageous to some early reptiles, allowing them to chew their food and therefore improve nutrient absorption.

However, according to one report, Reisz and his colleagues suggest that as this reptile lost the ability to replace teeth, the likelihood of infections of the jaw, resulting from damage to the teeth, increased substantially.

This is because prolonged exposure of the dental pulp cavity of heavily worn or damaged teeth tooth bacterial was much greater than in other animals that quickly replaced their teeth.
Syneron Dental Lasers signs clinical research agreement

Syneron Dental Lasers has signed a clinical research agreement with the Medical University of Vienna under the leadership of Professor Dr Andreas Moritz, one of the world’s top researchers who has been involved in the teaching and the development of laser dentistry for more than 13 years. Syneron Dental Lasers hopes the clinical research agreement will be a strong and solid framework for academic and scientific cooperation, which will drive the advancement of laser dentistry research forward.

Professor Moritz is the head professor of Professional Dental Training at the Bernhard Gottlieb University Department of Dentistry at the Medical University of Vienna and is the current President of the International Society for Oral Laser Applications (SOLA).

The Medical University of Vienna’s School of Dentistry is one of the world’s top six academic institutions to offer Laser Dentistry program in the Bernhard Gottlieb University. The School of Dentistry, under the leadership of Professor Moritz, has recently undergone major renovation, with a brand new research centre that includes state-of-the-art auditoriums and laboratory equipment.

“We have been carrying out researches with a number of laser systems, and we are extremely pleased to be able to study the LiteTouch™ and the Laser-in-Handpiece™ as it is essentially different and unique Er:YAG dental laser technology” said Professor Andreas Moritz. “As a laser dentistry veteran clinician and a researcher, the cooperation with Syneron Dental Lasers is instrumental to our academic research and will assist us in achieving the goals we have set to educate and combine the latest technology with laser dentistry research so that in the very near future practitioners and patients alike can immediately benefit from the innovations in this field.”

“Syneron Dental Lasers is pleased to have Professor Andreas Moritz on board,” said Ira Priag, Syneron Dental’s President. “This collaboration with Professor Moritz who is one of the world’s key opinion leaders in the field of laser dentistry will support the construction of powerful research cooperation and an education network, as well as the company’s position as a technological leader. Together with Professor Moritz, we will achieve our mutual goal to further develop the education and training of current and future practitioners - who stand to hugely benefit from evidence-based laser treatments and findings. This combined synergy between a company with superior technology and an excellent clinician with superior academic research abilities will provide the best foundation for innovative research, outstanding clinical training and successful laser dentistry practices.”

“Following a recent similar collaboration that was signed with the University of Barcelona’s Master program, we are confident that this collaboration with Prof Moritz will enrich and empower Syneron Dental’s contribution to laser dentistry research and will promote increasing laser usage in day-to-day dentistry.”

“We look forward to having many more laser dentistry researchers and clinicians from across the globe join our team.”

Dentists more scary than snakes and spiders

It’s not good news for dentists as the latest piece of research by the British Dental Health Foundation suggests that visiting the dentist makes people more nervous than snakes or spiders. The research echoes last month’s Adult Dental Health Survey, which revealed half of adults - especially women - were classified as having moderate to extreme dental anxiety.

The BDHF asked 1,004 people in the lead up to National Smile Month 2011 what made them most nervous from a list including heights, flying, injections, doctors, snakes, spiders, going to hospital and visiting the dentist. Over one in five people rated visiting their dentist as the thing that made them most nervous – more than any other category. Overall, statistically, heights topped the poll of biggest fears, closely followed by visiting the dentist and going to hospital. Snakes were rated fourth and spiders came fifth.

In comparison to doctors, dentists also struggled. The BDHF discovered that nearly 10 times as many people (22 per cent) were made most nervous by their dentists, compared to their doctor (two per cent). The Adult Dental Health Survey points to two dental treatments in particular as the main cause of these nerves: three out of ten (30 per cent) adults said that having a tooth drilled would make them very or extremely anxious. A similar number (28 per cent) of people reported equivalent levels of anxiety about having a local anaesthetic injection.

Dr Nigel Carter, Chief Executive of the British Dental Health Foundation, said: “Everyone in the profession knows that dental anxiety is a major barrier for many people to visit their dentist. What may prove concerning is just how poorly the profession rates in comparison to doctors. The comparison with snakes and spiders may appear frivolous, but it does suggest we still have a lot of work to do to build public confidence.

“The issue of anxiety affects everyone in the profession. Collectively we need to work together and we hope that the whole profession will get behind this year’s National Smile Month campaign which starts on the 15 May 2011. The campaign offers the best opportunity for everyone to reach millions of people whose nerves and anxiety are directly affecting their oral health.”

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