Dear reader,

Anyone who has been working in medicine for a long time has probably heard dentists referred to as “only failed medical students” or “overpaid sadistic tooth pullers.” While their medical colleagues may consider them second-class professionals, little is known about the fact that they have already left their mark in history, for good and for worse.

Did you know, for instance, that the creator of the electric chair was Alfred P. Southwick, a dentist from Buffalo in the USA? Observing the death of a drunken man touching an electric generator in one of his hometown’s factories, Southwick became a driven advocate of capital punishment by electrocution until he died in 1899. While highly debated now and back then, his idea has the dubious honour of being one of the few inventions of the early electric period to have survived the last century almost unmodified.

And what about art? When in 1936, American painter Grant Wood was looking for a man and woman to stand model for his most famous work “American Gothic”, he not only turned to his sister but also convinced his family dentist, Dr Byron McKeely, to pose. Until this day, the characteristic figure wearing farmer’s clothing and holding a three-pronged hay-fork eternally looks down at visitors from a wall at the Art Institute in Chicago.

Dentists have even been involved in politics. Rumour has it that one of the reasons that British Prime Minister Margaret Thatcher had to leave office in 1990 was that her Lord Chancellor and successor John Major was not able to rally support in the Conservative’s leadership election because he was recovering from a long-scheduled dental surgery.

The first US president George Washington, who suffered from severe dental problems throughout his life, died from a peritonitis due to a tooth abscess and was not even aware of the fact that he could have been caused by his dentures.

These few examples show that despite their bad reputation, dentists have always been influencing our lives to a high degree. I am wondering what their impact will be in the future apart from relieving people from pain and physical suffering through their professional skills.

Yours sincerely,
Daniel Zimmermann
Chief Editor
Dental Tribune International

“Dentists just seem to be doing fine, don’t they?”

Acrylates are everywhere

Acrylates have been around since the 1950’s, when Rohm and Haas began mass production of Plexiglas, a clear and resistant glass substitute made of polymerized methacrylate. It is used extensively for windscreen, airplane canopies, car lights and windshield, streetlamps, and so on. Numerous other acrylates have been synthesized and found applications in paints and adhesives, dental composite resins, printing inks, artificial nails, and medical devices such as contact lenses, hearing aids, and bone cement for orthopedic endoprostheses.

The salts of acrylic or methacrylic acid can be polymerized to form solid plastics which are inert and harmless. Nowadays, numerous (meth)acrylates, mostly used in dental bonding materials, printing inks, and artificial nails, are polymerized by exposure to UV light with help from a priming photoinitiator.

The monomeric building blocks acrylates and, to a lesser extent, methacrylates are strong irritants, but they are also notorious aller-

ethylene vinyl alcohol, but these gloves are inelastic and expensive. Double gloving with nitrile gloves, or polyethylene gloves under nitrile gloves, affords adequate protection for tasks that do not exceed 50 to 60 minutes.

(Meth)acrylates are tricky molecules to test. The concentration that will reveal allergic sensitization is close to the irritancy threshold. Furthermore, these molecules can induce active sensitization. Some authors have suggested screening series of patch test allergens. None of these series will pick up every case, but most will be detected if tested with commercial test series. None of these series will be necessary in most occupational cases, as well as testing with the patient’s own products, appropriately diluted.

Most patients in case reports of allergic contact dermatitis to (meth)acrylates have multiple sensitizations when patch tested. These have been regarded as cross reactions. However, chemical analyses carried out by investigators at the Finnish Institute of Occupational Health have shown that most acrylic-based industrial products contain numerous other acrylates as impurities, sometimes as much as 40% of the total weight of the product. These additional compounds are not disclosed on material safety data sheets. Many of the so-called patients are everywhere, and their use is likely to increase. Despite the plethora of publications on (meth)acrylates over more than a half century, new information keeps surfacing about these fascinating chemicals, enough recently to justify their nomination by the North American Contact Dermatitis Group as “allergen of the year 2012.”

Dental surgeons, assistants, and technicians are also at risk of allergic sensitization.”

To the Editor

Re: “Hand-held dental X-ray devices under investigation by FDA” (Dental Tribune Asia Pacific, Vol. 10, No. 3, pages 1–2)

Thank you for providing additional information for your readers beyond what was announced by the FDA. However, your readers should know that the level of operator radiation exposure from hand-held X-ray devices varies significantly between manufacturers and equipment styles.

Also, your closing statement that someone can patent something that does not have good tongue control is misleading.

CT exposes the patient to much more radiation than intra-oral radiography. Any handheld device that has comparable exposure to CT should not be used, as lower exposure levels are easily achievable.

Clark Turner, 17.02.2012

Re: “Intraoral device manoeuvres electrical wheelchair” (Dental Tribune Asia Pacific, Vol. 10, No. 3, page 5)

Wow! I have a disabled daughter who is fully dependent (unfortunately she does not have good tongue control) but the implications are amazing! Fantastic work is being done by all involved. It would be good if it could be widely available to all income brackets and countries.

Sonya, 04.03.2012

Re: “Saudi dentists receive US patent for novel soft tissue augmentation technique” (Dental Tribune Asia Pacific, Vol. 10, No. 3, page 5)

The tunnel technique has been published on by a number of sources using an acellular dermal matrix since the late 1990s. I am curious as to how someone can patent something that has been published in the past prior art and why the US patent office is issuing patents for techniques.

Gregor M. Kurtzman, 14.03.2012

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Dental Tribune welcomes comments, suggestions and complaints at feedback@dental-tribune.com