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cosmetic dentistry beauty & science

opinion
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Dr Sushil Koirala

Editor-in-Chief

Dear reader,

Welcome to this year's first issue of cosmetic **dentistry**!

After the expansion of the clinical horizons of Minimally Invasive Cosmetic Dentistry (MiCD) from cosmetic to comprehensive dentistry in 2021, MiCD education has widened in scope and has started demanding newer concepts, protocols and innovative technologies to help clinicians worldwide offer MiCD Care to their patients at MiCD Cost. Simple, fast, reliable and practical clinical protocols lay the groundwork for successful practice. In the pursuit of expanding MiCD Care globally, our team has realised that the MiCD Global Academy should now focus on MiCD clinical skills training and equipping "MiCDians" with minimally invasive smart technology.

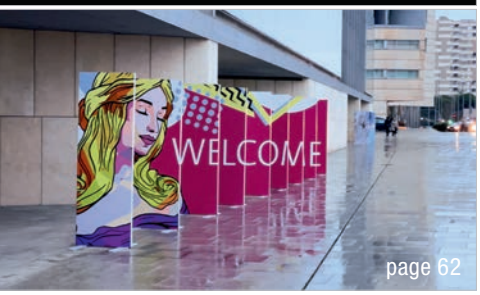
In this regard, the MiCD Global Academy has recently established the MiCD International Training and Dental Innovation Center in Nepal. The idea is to form a team of knowledge philanthropists from different fields of science and technology willing to work together to contribute their skills, knowledge and experiences to make MiCD Care practically useful, widely accessible and affordable to all interested dental professionals around the world. To kick off the mission, we have started collaborating with innovative minds and have already initiated a handful of projects on digital dentistry and dental artificial intelligence with a special focus on MiCD Care education and services.

I personally believe that innovation and philanthropy should go hand in hand—they complement each other beautifully. Innovation requires encouragement, proper mentoring and financial support, and philanthropy can provide both funds to sustain innovation and knowledge to mentor and encourage young minds. Translating an idea into reality requires proper incubation with skilled guidance. My aim with the MiCD International Training and Dental Innovation Center is to nudge young minds towards innovation in dentistry with the aim of developing start-up dental businesses that help MiCD Care reach every corner of the globe. Through this editorial, I would like to appeal for your kind support to help MiCD Care flourish in do-no-harm dentistry.

In this issue of cosmetic **dentistry**, we have excellent clinical articles that support the premise of MiCD Care. I hope you will enjoy reading this issue and hopefully grow eager to share your own clinical cases, clinical research findings and experiences with us so that our readers can benefit from them.

Sincerely yours,

Dr Sushil Koirala
Editor-in-Chief



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Study uses artificial intelligence for gingivitis detection

By Iveta Ramonaite, Dental Tribune International

The applications of artificial intelligence (AI) in dentistry have been widely explored in recent years. However, a recent study is one of the first to employ AI to detect gingivitis, enabling monitoring of the effectiveness of patients' plaque control. The technology has the potential for improving the early detection and prevention of oral and systemic diseases associated with periodontal disease, one of the most prevalent oral diseases globally. According to the World Health Organization, nearly one-third of cases of periodontal disease are severe.

The interdisciplinary study was a collaboration between researchers from Hong Kong, Guangzhou in China and Kuala Lumpur in Malaysia. In it, the researchers trained and tested a novel AI model on a data set of over 567 intra-oral photographs of gingiva with varying degrees of inflammation. The study found that the AI algorithm can accurately (>90%) analyse patients' intra-oral photographs to detect signs of inflammation, such as redness, swelling and bleeding along the gingival margin. Its accuracy in identifying sites with and without gingival inflammation is close to that of a dentist.

Lead researcher Dr Walter Yu-Hang Lam, a clinical assistant professor in prosthodontics at the University of Hong Kong, said in a press release: "Many patients do not attend regular dental check-ups, and they only seek dentists to alleviate pain when their teeth are at the end stage of dental disease, in which tooth loss is inevitable, and only expensive rehabilitative treatments are available. Our study shows that AI can be a valuable screening tool in detecting and diagnosing gum disease, one of the key indicators of periodontal disease, allowing earlier intervention and better health outcomes for the population," he noted.

Discussing the benefits of using intra-oral photographs in conjunction with AI technology, lead author Dr Reinhard Chun-Wang Chau, a clinical research coordinator in restorative dental sciences at the University of Hong Kong, said that, based on intra-oral photographs, patients could see which areas they had not cleaned well and seek dental care earlier.

The researchers now plan to make the technology accessible to elderly and underserved communities to improve their oral health outcomes and reduce healthcare disparities.

Editorial note: The study, titled "Accuracy of artificial intelligence-based photographic detection of gingivitis", was published on 26 April 2023 in the International Dental Journal*, ahead of inclusion in an issue.*

From left: Drs Walter Yu-Hang Lam and Reinhard Chun-Wang Chau. *(Image: © University of Hong Kong)*

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INTERNATIONAL ESTHETIC DAYS

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Agreement frees thousands of clear aligner patients from non-disclosure agreements

By Dental Tribune International

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Patients who are unhappy with their orthodontic treatment must be allowed to speak out about it and file complaints if necessary. This was the take-home message from a recent settlement between at-home orthodontics company SmileDirectClub (SDC) and the office of the attorney general (OAG) for the District of Columbia, who spatted over the company's refund policy for unhappy patients.

The OAG sued SDC in 2022 for allegedly preventing patients who were unhappy with its services or injured by its products from filing complaints and making negative statements. Local news outlet NBC4 Washington reported at the time that the orthodontics company required customers who sought refunds after 30 days to sign non-disclosure agreements in order to have their money returned—a practice that the OAG said violated consumer protection laws in the district. Karl Racine, then the attorney general, said at the time that signing the non-disclosure agreements prevented patients from making negative statements about their treatment and SDC and forced them to remove negative comments already made.

The settlement requires SDC to release around 17,000 former patients around the US from provisions of non-disclosure agreements, to change its refund policy for all US customers and to pay US$500,000 to the District of Columbia.

The parties failed to agree on any wrongdoing. Attorney general Brian L. Schwalb commented in a press release that SDC "promised a simple, safe and affordable way to straighten teeth and touted five-star reviews—but behind the scenes, the company silenced dissatisfied consumers and buried complaints about injuries caused by its products".

Susan Greenspon Rammelt, chief legal officer at SDC, maintained that claims of the company seeking to quell unhappy consumers were baseless. Rammelt said in a statement: "For too long [has there] been a misinformation campaign claiming [SDC] stifles negative consumer feedback through the use of non-disclosure agreements. While we were disappointed this misinformation caused the District of Columbia to file its complaint, we are pleased to set the record straight and work with the District of Columbia's office of the attorney general in its efforts to create new policy for the industry and increase customer transparency."

Dr Myron Guymon, president of the American Association of Orthodontists, commended the OAG in an association press release for "recognising potentially deceptive and unfair business practices and for taking action to ensure that such practices do not harm unsuspecting orthodontic patients".

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