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**Dr Sushil Koirala**

Editor-in-Chief



## MiCD knowledge philanthropy

**cosmetic dentistry** has become one of the most popular clinical cosmetic dentistry magazines in the world. This success has in large part been due to the high standard of clinical articles submitted by the authors, the article selection approach of the editorial team and the print quality. Because of this, we were able to offer free accessibility to the digital version of the magazine on Dental Tribune International's (DTI's) official websites and those of partner academies, which was indeed a major step forward. I appreciate this knowledge-sharing initiative of DTI, which has facilitated my personal mission of promoting the knowledge philanthropy concept in the field of dentistry.

I vividly recall that, in the editorial I wrote for **cosmetic dentistry** 1/2009, I discussed the scope of the minimally invasive concept in cosmetic dentistry, and in issue 4/2009, I wrote a comprehensive article proposing the minimally invasive cosmetic dentistry (MiCD) concept and its treatment protocol. The MiCD concept, as we look back at it 13 years since its inception, has been widely recognised and very well received by global clinicians.

It is my pleasure to report that, thanks to the overwhelming acceptance of the MiCD concept and treatment protocol in aesthetic dentistry, we have expanded the clinical horizons of MiCD from cosmetic to comprehensive dentistry. The encouraging responses, suggestions and requests from clinicians, researchers and academics around the world have led us to take MiCD Global Academy management from a privately governed and exclusive sponsorship approach to a non-profit and open sponsorship approach. From 1 June, this new philanthropic approach began under the philanthropic dental education wing of the Dental Community for Humanity division of the Punyaarjan Foundation in Kathmandu in Nepal to promote the

MiCD mission as an independent and non-commercial initiative in dental education.

With this, the MiCD Global Academy has morphed into the MiCD Knowledge Philanthropy Academy with the support of many knowledge philanthropists and open-minded dental companies. This has been done with the objective of serving the global dental profession and humanity through the science and technology of MiCD.

To make MiCD knowledge and skills easy to understand and apply in daily practice, I have broadly divided the MiCD care and education system into four domains, namely MiCD lifestyle dentistry, MiCD functional healthy dentistry, MiCD cosmetic dentistry and MiCD practice management. MiCD care and education in all these domains are based on the premise of the MiCD concept that I proposed in 2009. Alongside the introduction of these domains, related free MiCD educational materials will be published in the upcoming MiCD clinical journals and DTI publications according to the need of and demand by readers.

I hope that the global dental fraternity will greatly help us foster our initiative of MiCD knowledge philanthropy, and I urge all our readers to take the opportunity to be part of the MiCD global mission.

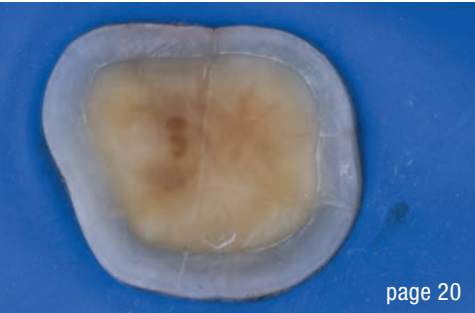
I express my gratitude to our valued readers, esteemed authors, advertisers and everyone who has directly and indirectly supported **cosmetic dentistry** and thus helped bring the magazine to where it is now. I hope you will enjoy this issue of **cosmetic dentistry**, and I invite you to send your valuable feedback and ideas.

Sincerely yours,

Dr Sushil Koirala  
Editor-in-Chief



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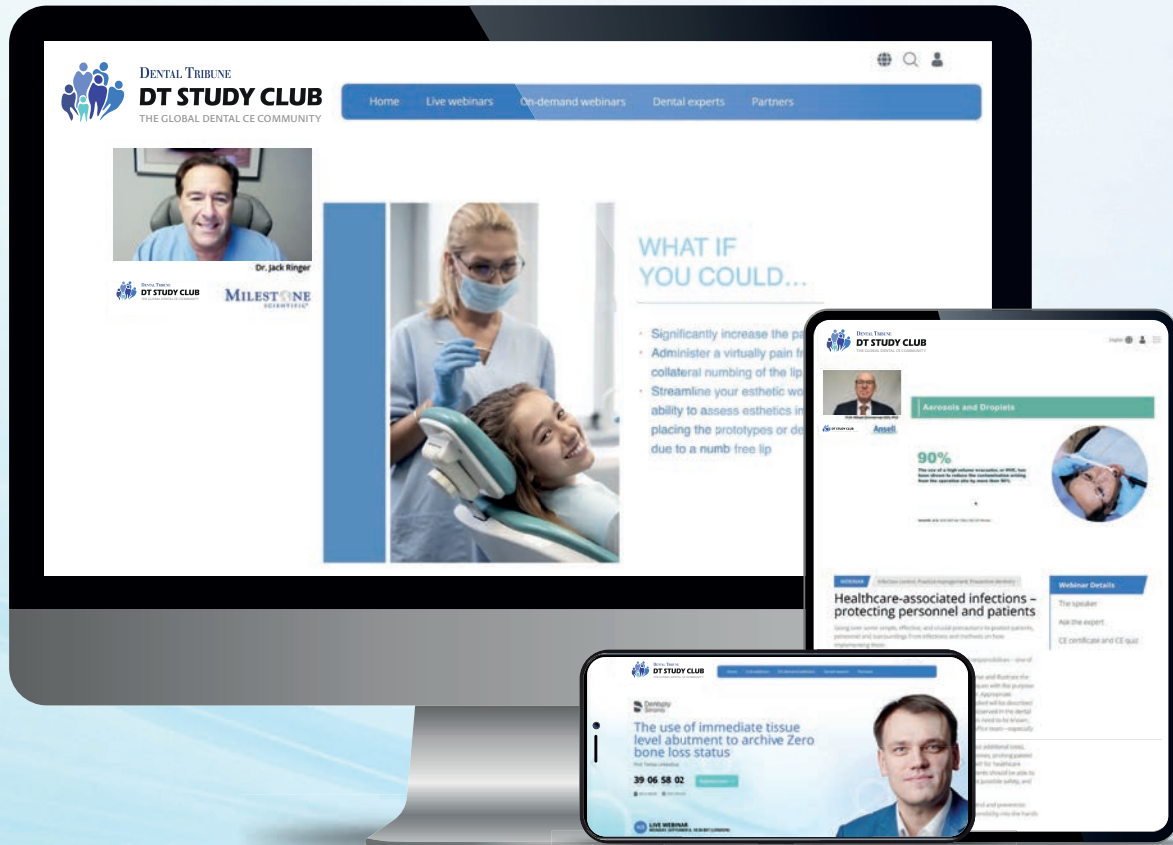
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“I hope that **sustainable dentistry will soon reach critical mass and become the norm**”

An interview with Dr Davinder Raju



Dr Davinder Raju

By Iveta Ramonaite, Dental Tribune International

**Dr Davinder Raju** is the lead dentist at Dove Holistic Dental Centre in Bognor Regis in the UK and the founder of Green Dentistry, an online platform that helps dental practices become more environmentally conscious and reduce their carbon footprint. In this interview with Dental Tribune International, Dr Raju, an ardent advocate of sustainability, explains why he thinks apathy and the fear of litigation are the greatest enemies of sustainable dentistry and how dental professionals often have false beliefs about sustainability. He also discusses why having an environmentally aware team with a can-do attitude is essential in order to promote sustainable practice and describes why the dental industry should be transparent about the environmental impact of its products.

“There has to be clear leadership and a desire to embrace sustainability in order to promote sustainable dentistry.”

healthcare, with a focus on prevention, early diagnosis and management, using minimally invasive operative procedures and having the best long-term interests of patients at heart, while at the same time mitigating negative impacts on the planet so that we do not undermine prospects for future generations.

Using a minimal intervention approach to dentistry means that patients are less likely to enter the restorative downward spiral, thus reducing the need to provide resources such as dental restorative materials.

**You believe that great leaders should know not only why they are running a practice but also how they are running it. Could you elaborate on that?**

We know that greenhouse gases emitted by human activities cause climate change and that the effects of climate change, some of which are already apparent, pose a global health threat.

Now, “to do no harm” is one of the pillars of medical ethics, yet globally, the health sector emits more carbon dioxide than Japan, which is currently ranked as the fifth highest emitter of all countries. Given its mission to protect and promote health, the health sector, including dentistry, has a responsibility to reduce its own climate footprint. This can only be accomplished by examining how we are providing services. Only by scrutinising how we operate can we consider the possibility of delivering the same service, but by employing an approach that has a lower environmental impact.

Climate change will become an increasing concern for consumers, and the dental profession must take action to reduce the harm that healthcare is causing.

**To follow up on the previous question, what motivated you to found Green Dentistry, and how do you promote sustainable development in your business?**

I first need to explain why I set up an eco-friendly dental practice. The catalyst came about when I was studying for my master’s degree in advanced minimum intervention dentistry. I was struck by the ecological plaque hypothesis. Inside a healthy mouth, there is a stable and healthy community of cells—microbial homeostasis—where a mutually beneficial equilibrium exists between

**Dr Raju, what does sustainability mean to you personally, and how would you define sustainable dentistry?**

I’m continually amazed at the abundance of life that our planet has to offer, and it is something that future generations should have the opportunity to enjoy. To me, sustainability is about being a good custodian of the environment and ensuring the well-being of future generations. It’s about making decisions that reduce environmental impact. I’m deeply concerned about the fact that underprivileged children will suffer disproportionately more in light of the consequences of unchecked climate change.

As for sustainable dentistry, I would define it by combining Gro Harlem Brundtland’s famous definition of sustainability with minimally invasive dentistry. Sustainable dentistry involves delivering optimal oral and dental

the microflora and the host. If this balance is upset, disease ensues. Consequently, I started thinking about the effects of my business on our host, namely the environment, and how I could mitigate that impact.

When I wanted to set up an eco-friendly dental practice, information about sustainable dentistry wasn't readily available. Since there seemed to be a lack of practical advice, I had to piece information together from other industries. Green Dentistry came about when I was approached by other dentists who wanted to make their practices greener but didn't quite know where to start.

There has to be clear leadership and a desire to embrace sustainability in order to promote sustainable dentistry, and having an environmentally aware team with a can-do attitude is essential. As a practice owner, I'm busy running the practice, and I don't have the time to manage day-to-day activities. Good ideas and strategies aren't worth anything if you can't implement them, so I delegate the role of maintaining the changes to a sustainability champion. However, we need the entire team to be on the same page for both coherence and creativity. The team needs to be willing to suggest ideas to the sustainability champion and to ensure that they are discussed at practice meetings.

“We've taken many steps in the right direction, but we never assume that we've done enough. I want the team to be forward-thinking and future-oriented [...]”

Running a sustainable practice is about creating a culture that consistently seeks new opportunities to improve efficiency and environmental performance. The right team is essential, and its members need to unite and collectively participate. We've taken many steps in the right direction, but we never assume that we've done enough. I want the team to be forward-thinking and future-oriented, almost as if the team members are carrying out mini eco-audits as they're walking through the practice, carrying out their regular procedures while thinking to themselves: “Is there a better way of doing this? Is there another product we could be using?”

**Sustainability is gaining increasing awareness in dental practices worldwide. How would you explain this trend?**

Programmes like David Attenborough's television series *The Blue Planet* and professional magazines such as the *British Dental Journal* have all helped raise awareness of sustainability. Still, there is possibly a disconnect between what we do at home and in our working environments. During the COVID-19 pandemic, many dental professionals were alarmed by the large amounts of extra personal protective equipment that they had to use. This may have produced a cognitive tipping point and made dental professionals realise how much the dental sector negatively impacts the environment.

I believe that sustainable dentistry is currently being introduced to the dental curriculum at King's College London and hopefully at other dental teaching hospitals. I hope that sustainable dentistry will soon reach critical mass and become the norm.

**Why is it crucial that the dental industry is transparent about its supply chains and environmental policies?**

The lion's share of carbon dioxide emissions produced by the provision of healthcare are generated upstream and are attributable to the supply chain through the extraction of raw materials and the production, transport and distribution of goods and services. If the dental industry is transparent about the environmental impact of its products, we, as end users of dental products and materials, can make greener procurement choices. In addition, industry-wide environmental policies that promote responsibility and accountability will help those working in the dental profession to determine with which companies they wish to align themselves and do business.

**What would you say is the greatest enemy of sustainable dentistry, and what are some of the barriers to sustainability in dentistry?**

The greatest enemy of sustainable dentistry is apathy. It is the feeling that, since dentistry's overall impact is relatively small compared with, for example, coal-fired power stations, there's no point in making the necessary changes towards a more environmentally sustainable future within the dental environment. However, we can't be passive bystanders. We can't stand back and be spectators knowing that conditions that humans have created, and are continuing to create, are a threat to humanity and other life forms.

We are facing a climate crisis, ever-shrinking biodiversity and acidification of the oceans. We can vote for policymakers who prioritise the environment and make a move towards delivering sustainable dentistry now. Regulatory change will come eventually, but we shouldn't wait for the government to take action. It's immensely satisfying to do the right thing.





The fear of litigation is also a barrier to embracing sustainability. In the UK, *Health Technical Memorandum 01-05: Decontamination in primary care dental practices* has resulted in a significant increase in the use of single-use plastics and increased costs for dental practices. Although aware of the importance of infection prevention, we seem to have tipped too far on the side of caution. If used appropriately and recycled when possible, plastic is a valuable material. However, single-use plastics are now ubiquitous in the dental environment.

There is also a common perception that the changes necessary to achieve a more sustainable approach are expensive to implement. Yes, you can spend a great deal of money on capital expenditure by purchasing solar panels, ground source technology or heat pumps, but this isn't the only way to achieve a more sustainable approach to delivering dentistry. For example, if a practice wants to help reduce carbon dioxide emissions, it can simply switch to a renewable energy provider. As demand grows, renewable energy will increasingly be sourced for the grid, thus reducing the supply generated from fossil fuels.

It's picking the low-hanging fruit that hopefully will spark a change in behaviour towards sustainable practice.

#### **What measures do you take outside of work to minimise your impact on the planet?**

We obtain our energy from a renewable energy provider at home, don't eat meat (for ethical and environmental reasons) and buy organically grown food. Last year, we started growing our own vegetables fed with homemade fertiliser made from comfrey and nettles. We also compost.

We have a wild flower garden at the front of our house, which has never been mowed in order to help increase biodiversity. It looks a mess for a few months of the year, but it is delightful when the flowers appear. We also recycle, of course, but more importantly, we're not big consumers. If we buy goods, we try to buy sustainably sourced goods whenever possible.

*Editorial note: More information can be found online at [www.greendentistry.co.uk](http://www.greendentistry.co.uk).*