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Diabetes mellitus and its sixth complication explained.

Abstract: In 1999 Löe described periodontal disease (PD) as the sixth complication of diabetes mellitus (DM) because this latter group of patients has a 3 – 4 times greater risk of developing PD when compared with non-diabetics. This rises to 10 times for smokers.

DM and PD are inter-related, one disease affecting the other and vice versa. The exact mechanism is unclear but may be related to inflammation, blood markers for which are raised in both diseases.

From the medical point of view there are five complications of DM namely cardiac, vascular, renal, ophthalmic and neurological that can be visualised as a simple hub called DM with spokes for the above complications.

However, the research evidence has shown that the severity of all these five complications is worse when patients have active, uncontrolled PD. When PD is treated, there is an improvement in glycaemic control.

These results have led to the conclusion that PD is not a separate complication of DM but a co-morbidity factor acting by:modifying the severity of another disease and modulating the severity of diabetic complications in the manner of a rheostat. A new model is proposed together with a system for doctors and dentists to work together.

There are likely to be wide variations in outcomes depending on both the bacteriological load from mature dental plaque and individual immune responses.

Medical and dental risks have been classified using a traffic light method for people living with diabetes mellitus to share with their respective advisors.

A method of improved interdental plaque control is described.

More focussed research is required.

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Biography: Dr. Christopher Turner qualified from the Royal Dental Hospital of London with the degree of Bachelor of Dental Surgery with distinctions in 1968 and spent the first few years working in general practice before undertaking higher training in restorative dentistry in London and Newcastle upon Tyne. During this time, he passed the Fellowship in Dentistry examinations of the Royal College of Surgeons of England and gained his Master of Dental Surgery degree.

In 1979, aged 34 years, he was appointed as a Consultant/Senior Lecturer in the University of Sheffield Dental School with the remit to establish new Department and a self-contained multi-surgery unit, separate from the school, for final year dental students to help them make the transition to qualified general practitioner. This was the first unit of its kind in the UK, has been copied and continues in the same building today. Then in 1984, he moved to an NHS appointment as Director of Dental Services in Salisbury. He took early retirement from the NHS in 2000 to establish a multidisciplinary private referral practice before retiring in 2012.

He has always had an interest in prevention and plaque control and the links between diabetes mellitus and periodontitis, and is the inventor of the Chooseabrush® method to help patients with gingival recession optimise their oral health.

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