The future of dentistry?

Dr Anoop Maini discusses how to raise the cosmetic bar using computerised diagnosis

Recently attended a dental-training course that was valuable for my new staff, but left me, a 16-year dental business veteran, a little disappointed. The course presented a business and medical model of dentistry that reflected a philosophy that is the corner of dentistry, which is also known as dental care. This concept is strictly limited to the oral cavity, and ignores the majority of the stomatognathic system. It also ignores the fact that we have tremendous impact on our patients' TMJ, muscles, nerves and airway every single day.

In the limited model: dentist treats teeth and gum. We do root canals, extractions, fillings, crowns, partials, dentures, bridges, implants, cosmetics, and all of the services that are confined to the dental box or oral cavity. Only three per cent of dentists have stepped out of this dental box and made that step to become ‘dental physicians’.

Beyond dentistry, doctors examine and diagnose their patients every day. The modern-day GP uses advanced technology to examine the patient, make a diagnosis, treat and/or refer. The ‘three per cent’ dentist, uses advanced technology to examine, diagnose, and treat and/or refer. This dentist knows that teeth are examined and diagnose their patients every day. The modern-day GP uses advanced technology to examine, diagnose and treat without first diagnosing and treatment protocol will be exceptional treatment that creates optimal cosmetics, function, and stability i.e. ODP. Optimal Dental Physiology includes improvement or elimination of headaches, face pain, neck pain, ear pain, sinus problems, obstructive airway problems, sinus problems and many other issues.

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1. The health and plane of occlusion.
2. The temporomandibular joints.
3. The neuromuscular system.
4. An orthopaedic examination of the head and neck.

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The examination of occlusion must include these four areas:
1. The health and plane of occlusion.
2. To quote Dr Peter Dawson, ‘All occlusal analysis starts at the temporal mandibular joints.’
3. In my opinion, you should never begin restorative, orthodontics, and/or sleep treatment without first diagnosing and correcting (if possible) a TMD condition. In my practice, this includes an extensive history, joint vibration analysis, tomography, and, if necessary, MRI. If you feel your practice cannot support the investment necessary in the more costly imaging systems you should be using a thorough history for your subjective findings and Joint Vibration Analysis (www.IndenSystems.com) for the objective portion of your diagnosis. Diagnosing the health of the TMJ is the responsibility of every dentist. However, it is not the dentist’s responsibility to treat. Just as a GP doesn’t treat all heart ailments, we don’t need to learn how to treat advanced degenerative joint disease or avascular necrosis of the condyle, but we sure better find it when it exists.

5. The temporomandibular joints.

The neuromuscular exam must not be confused with the neuromuscular treatment philosophy. The neuromuscular exam combines the subjective findings of the patient’s history and muscle palpation with the objective findings of the resting and functional health of the muscles using surface electromyography (EMG), muscle strength tests, ROM and jaw tracking. This information allows me to assess the neuromuscular components involved with chewing, swallowing and breathing. If the diagnostic tools are not available in-house, there is a network of BioPAK Centres (www.BioPAKCentre.co.uk) established in the UK that will collect the information for you. These everyday functions can degrade to a point, which ultimately depletes the overall health of the muscles such as clenching, bruxism, and patients whose chewing muscles are painful and fatigued. Obstructive sleep apnoea and patients who have distorted occlusal planes have to go through ‘oral gymnastics’ to accomplish chewing, swallowing, and breathing.

4. Even if you have to refer them out, all dental patients should have the opportunity of a thorough orthopaedic analysis. The examiner will take a lateral cephalometric radiograph to assess the orthopaedic conditions of the maxilla and mandible, to help diagnose and treat orthodontic patients. This is particularly important for relevant patients receiving dentures or extensive rehab, TMD or sleep apnoea treatment. Comprehensive radiographs should include lateral cervical spine, frontal skull, TMJ, teeth, jaw joints, mandible, TMJ tomographs of the condyles, sinuses and a sub mental vertex x-ray. Cone Beam Computed Tomography provides an excellent, low radiation dosage way to collect 3D data in a single scan.

I recommend the use of additional diagnostics as needed. I will use T-Scan for initial occlusal imaging and force diagnosis, and to objectively guide my case finishing and equilibration. This is extremely important after final restorations are seated. The teeth, muscles and joints all work together to create the optimal dental physiology and a harmonious environment for our dentistry. The use of T-Scan, EMG, and JVA allow me to objectively see the impact my treatments have on creating balance in the stomatognathic system. What’s most important is they make it easier to know when I am finished treating and the patient is ready for the next step by removing much of the subjective guesswork of a purely subjective analysis.

We can deliver beautiful, healthy and longer-lasting dentistry if we work with the patient’s craniofacial physiology, instead of simply putting manmade materials into a hostile environment that has already destroyed the natural teeth. This is a hard new concept, but the objective tools of today allow us to see the physiology more easily and with more accuracy than ever before.

Computer diagnosis will be important in the future of dentistry. Come and speak to Dr Maini about the future of dentistry at the BACD Edinburgh annual conference in November 2009 (www.BACD.co.uk).

References
1. James E. Carlson DDS “Occlusal Diagnosis” Reference www.oclusion.co.uk

About the author
Dr Anoop Maini DDGD (UK), BDS (Lond) graduated from Kings College in 1992. Dr Maini has a special interest in cosmetic rehabilitation from his practice at Aqua Dental Spa, London W1. He currently serves on the Board of Directors for the British Academy of Cosmetic Dentistry. Information about Biometric Diagnosis and Biometric equipments can be obtained by visiting www.Oclusion.co.uk and www.IndenSystems.com. For further information about becoming a member of the BACD, call Suzy Rowlands on 020 8241 9528 or visit www.bacd.com and join online.