BY HAFEEZ AHMED

HIDDEN BEHIND THE SMILE

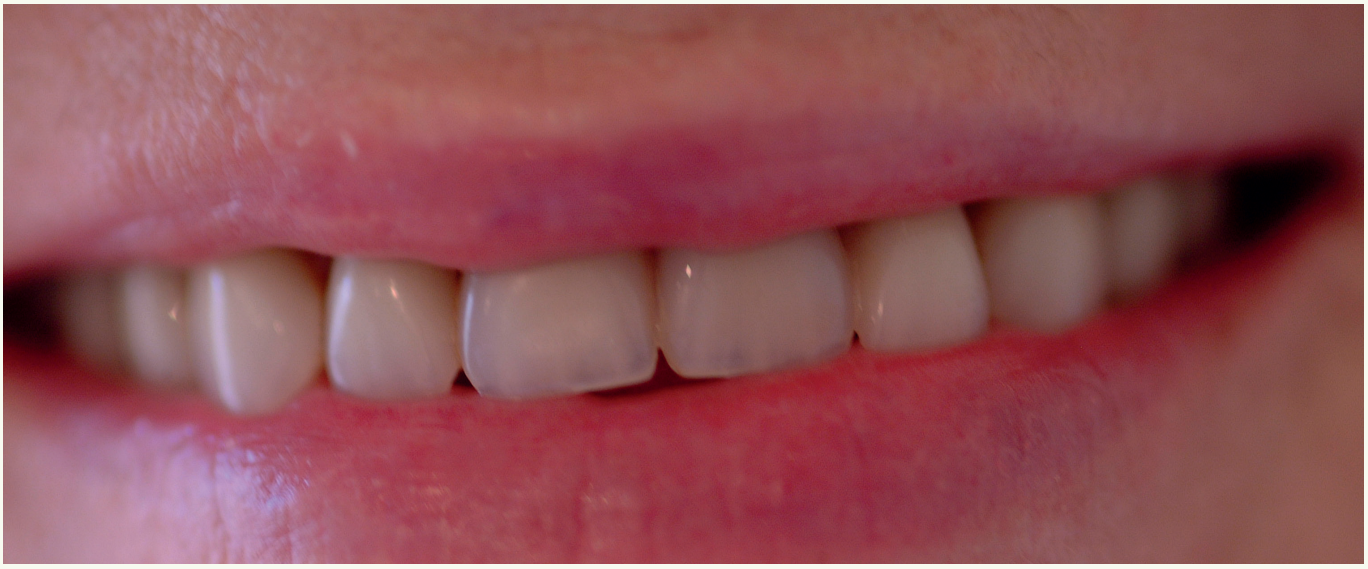


Figure 1: **The Smile - 9 teeth peeping through lips**

How old is the person in figure 1? Are they male or female? How much coffee do they drink, or are they a tea drinker? Looking at the translucency of the central incisors, perhaps they have a passion for orange juice or gin or both?

Context

As professionals, we are required to make judgements without being judgemental or personal. It is a skill that takes considerable development and each one of our many experiences contributes to the process. As an undergraduate student, along with seven of my colleagues, I fulfilled the entry requirements to take part in the Colgate-Palmolive Scholarship. We were required to submit an essay entitled, 'What can be gleaned about a person from the examination of a single tooth'. It was a fascinating project and I was amazed at what can be learnt about a person from the examination of a single tooth. I won the Scholarship, travelled to Adelaide in Australia to join a research team and investigated the association between *Fusobacterium Nucleatum* and periodontal diseases.

Reveal

The patient in figure 1 is 75 years old and is grateful for her smile. She is equally grateful that it does not look artificial.

Figure 2 reveals that the patient is partially dentate, her lower arch is her natural teeth and her upper is a full-arch implant retained bridge.

The treatment was completed in 2008 and over the years has been maintained with a combination of homecare and professional supportive

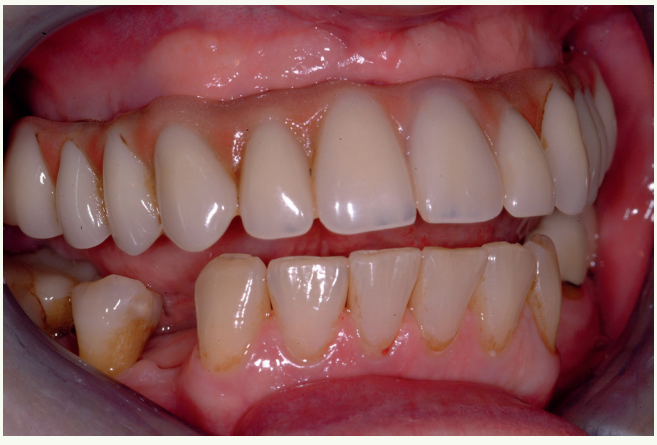


Figure 2: **Upper arch implant retained bridge**

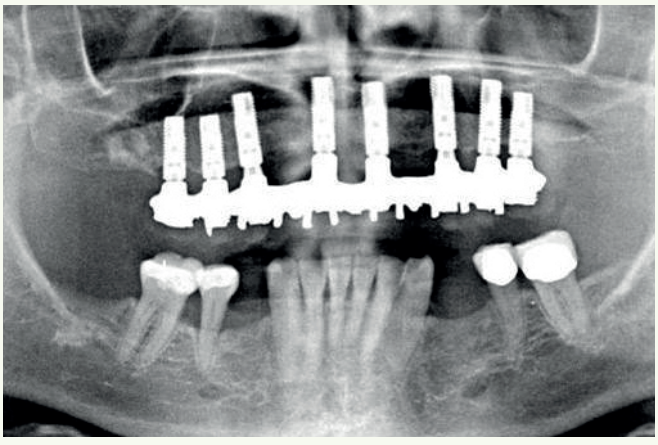
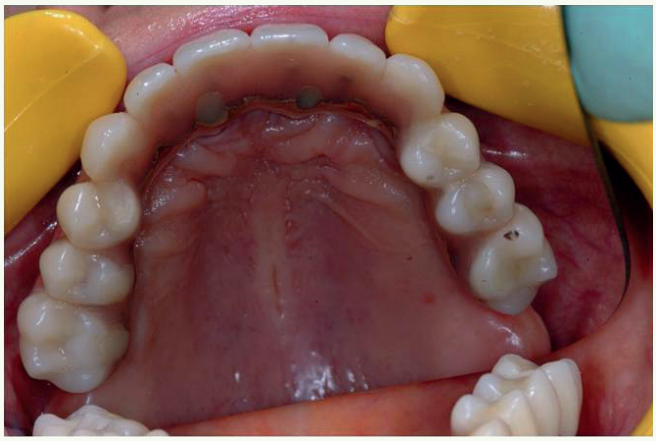


Figure 3: **Radiographic appearance**

Figure 4: **The palatal surface of the upper arch bridge**



periodontal therapy (SPT). The SPT has been provided at three month intervals. Maintenance has not been easy as access to the gingival crevice around the implants is almost impossible. Figure 4 shows the palatal surface of the bridge, access to the gingival crevice is largely concealed by the underside of the bridge.

A Brief History

The patient was referred in 2006; she was 56 years old, had never smoked and was not taking any medications at the time of referral. Figure 5 is a copy of the radiograph which accompanied the referral. The patient had already lost most of her upper teeth and what remained displayed all the classical signs of advanced untreated chronic adult periodontitis. During the post examination discussion, I aimed at managing her expectations and actually went as far as saying, "If you can't change your homecare don't bother considering fancy treatment". I was mindful that if the patient continued to lose bone at the same rate as prior to the referral, then the prognosis for a satisfactory outcome was bleak. I was also mindful of the scientific speculation on the matter of bone loss in untreated patients diagnosed with periodontitis. The average bone loss is speculated to be 0.3mm per year.[1,2] In patients treated surgically, with no supportive periodontal therapy, bone loss is speculated to be 1mm per year.[3] Ensuring the patient was able to provide informed consent was predicated on her understanding that the degree to which she complied with my oral hygiene instructions was more important than the choice of any particular treatment method.[4]

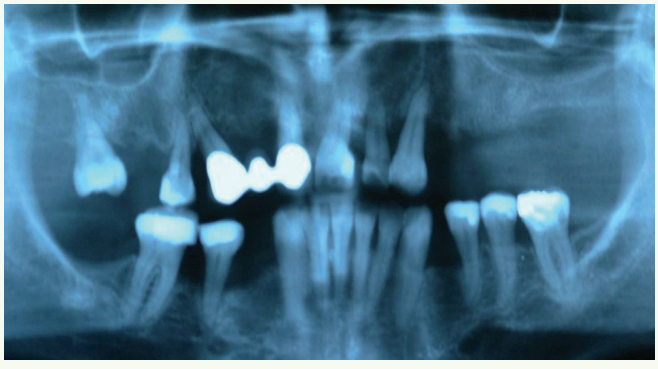


Figure 5: **The radiographic appearance of the patient at initial consultation in 2006**

Treatment in Brief

Broadly speaking the agreed treatment plan was divided into:

1. Cause related therapy
2. Review and revise
3. Corrective therapy
4. Review and revise
5. Restorative therapy
6. Review and revise
7. Maintenance therapy

During phase 3 of the treatment plan it became clear that her remaining upper natural teeth were beyond reasonable treatment. She was very upset to learn this and at the time, after some consideration, she insisted on having 'teeth in a day,' an emerging treatment option at that time. This is a dental implant procedure that aims to replace missing teeth with a full set of teeth in a single day, rather than the traditional multi-step process that can take months. The upper arch implant retained bridge was completed in 2008.

The original bridge has now been in function for 17 years; it had a significant refurbishment (replacement of the acrylic teeth) after 10 years and is currently due another. The patient has continued to attend SPT sessions at an interval of 3 months and although the bleeding score has always been around 90% her periodontal tissues have remained stable. She stopped attending SPT sessions during Covid lockdown and then continued to remain in self-isolation. Each time we contacted her she said, "I'm not ready to return to the real world just yet". She finally returned to the practice after an 18 month break with peri-implantitis around two of the eight implants. The inflammation was resolved with treatment, however periodontal pocketing has remained above 4mm. Since then, she has continued to attend for SPT sessions at an interval of three months.

Insight

From the outset I shared with her my concerns that, for her age, to have lost so many teeth and present with this degree of bone loss indicated a very high susceptibility to ongoing disease. I reiterated time and again that given her high susceptibility, periodontal therapy would be challenging and, that if it were successful, then maintenance was likely to be challenging. The risk of implant failure was high but if successful, then maintenance was equally likely to be challenging.

Shortly after the bridgework was completed in 2008 the patient confided in me, for the first time, that she had been diagnosed with Myalgic Encephalitis (ME) in her forties and during it she was practically bedridden for about five years. I simply said, "You didn't tell me that before". Some years later she jokingly confided in me that her first husband had nick-named her 'Road-Runner' after the Looney Tunes cartoon character because of her tendency to rush around.

Some years later she admitted that her homecare was inconsistent and that she had not really been able to make any significant improvement in her regime. Some years later, whilst in discomfort from her jaw joint and associated muscles, she confided in me that she wakes up most nights with her teeth clenched together. Some years later she confided in me that she tends to spend most of the time feeling frustrated. That when she has nothing to do, she gets frustrated through boredom and that when she has a task to complete, she becomes overwhelmed and frustrated. She also said, "I'm always stressed, it's my nature, I can't change it".

Over the years, in response to the patient's disclosures, I have jokingly said, "It's a wonder any of the treatment has worked" and I have advised her that, in my opinion, the entire success of her entire treatment is down to the SPT and that having it provided at three monthly intervals has proved to be the correct interval period for her.

This case highlights and reflects the fact that patient compliance is variable and challenging.[5,6] Furthermore, patients sometimes change what they disclose over time.[7]

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