Dear reader,

The recent failure by a dental unit run by the University of Hong Kong to implement a sterilisation protocol for a couple of days is worrisome, even though the damage to the health of the more than 250 patients and staff affected can be considered to be low at this point. Such an incident in an advanced clinical setting leaves one wondering about the occurrence of similar blunders elsewhere.

In fact, comprehensive data on the implementation of infection control and occupational safety measures in medical and dental practices throughout the APAC region is lacking but recent reports from countries like India do not hold well. A 2011 data analysis of more than 200 studies conducted all over the globe, for example, found that the incidence of hospital-acquired infections is three times higher in developing countries than in Europe and the US.

With millions of people expected to seek medical and dental treatment outside of their home country by 2015 (see page 3 of this edition), this issue is now one that goes beyond national borders. Effective programmes in infection control and patient safety will have to be implemented immediately, not only by national governments but also throughout the South and South-East Asian region, or the new boom in medical tourism could collapse soon.

In addition, training in infection control and occupational safety at dental schools and through postgraduate training needs to be stepped up in order to keep the risk of patient infection to a minimum.

What is most important, however, is that clinicians appreciate that infection control measures are not just a prudence but an integral part of daily practice.

Yours sincerely,

Daniel Zimmermann
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Surgical factors that influence the aesthetic treatment outcome

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Dental implants provide a predictable means for replacing missing teeth. Increasingly, the demand for implant treatment involves not only the restoration of function, but also achievement of an aesthetically pleasing pros thesis that blends imperceptibly with the rest of the natural dentition.

Both surgical and restorative factors contribute and interact to achieve an aesthetic treatment outcome. Surgically, the clinician is mainly able to influence the hard and soft-tissue architecture of the edentulous space, which in turn provides the soft-tissue frame for the prosthetic reconstruction.

A detailed evaluation of the site is required as a first step. Sites that are compromised by loss of bone and soft-tissue height may be difficult or impossible to reconstruct to the original pristine form. Limitations of treatment and the risk of adverse aesthetic outcomes need to be recognised, and communicated to the patient before the commencement of treatment.

A number of surgical factors are under the control of the clinician. Positioning the implant in the correct restorative position is a critical determinant of aesthetic outcome. Malpositioned implants maybe associated with adverse soft-tissue outcomes, including loss of papillae and recession of the midfacial mucosa.

Facial malposition can be a risk with immediate implants placed into extraction sockets. When multiple adjacent teeth need replacement with implants, the relative position, dimensions and number of implants are important surgical considerations. Adjacent implants if placed too close together risk loss of the bone between the implants, which in turn may cause flattening or a crater between the papilla. This can have very negative aesthetic implications.

As a general rule, adjacent implants should be avoided. Clinicians should also be aware of the dimensional changes that take place when multiple adjacent teeth are removed. It is often necessary to replace the missing soft-tissue by addition of pink porcelain to the cervical regions of the prosthesis.

Ongoing modelling of the alveolar bone may cause flattening of the ridge and thinning of the mucosa over time. Clinicians should attempt to reconstruct the natural morphology of the ridge and mimic the appearance of a root emergence by grafting the external surface of the bone with bone substitutes that have a slow turnover rate.

When adverse aesthetic outcomes occur, options for treatment depend upon the aetiology of the recession. Recession caused by inflammation or thin mucosa in an otherwise properly placed implant can usually be corrected with soft tissue (connective tissue) grafts.

With mucosal recession caused by facial malposition of implants, soft tissue grafting methods have limited success. In severe malposition cases, the only practical solution is to remove the implant, reconstruct the ridge and insert a replacement implant in an optimal axial position.

In summary, achieving acceptable aesthetic outcomes with implants depends upon proper evaluation of the site and technically proficient placement of the implant with adjunctive augmentation procedures. When adverse outcomes occur, treatment options are limited. The adage that “prevention is better than cure” holds true for implants and adverse aesthetic outcomes.

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Dental Tribune welcomes comments, suggestions and complaints at feedback@dental-tribune.com

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Freeing the industry

Troy Williams
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The decline in the Australian market for dental equipment can largely be attributed to the strong growth over FY2008-10 (Australian financial years running 1 July through to the following 30 June), the year in which product sales peaked.

The boost in that year was mostly due to two reasons. Firstly, tax breaks provided by the Australian Government in response to the global financial crisis led to a significant increase in expenditure on capital goods by dental practices. The thirty per cent small business and general business tax break, announced in the FY2008-09 Mid Year Economic and Financial Outlook (MYEFO), provided an additional thirty per cent tax benefit for businesses that committed to new capital investment between December 2008 and June 2009.

The scope of the small business and general business tax break was extended in FY2008-10 Australian Government budget. The tax benefit on capital goods was increased from thirty per cent to fifty per cent and the time frame was increased from June 2009 to December 2010.

The impact of the Australian Government’s stimulus measures was to bring forward capital expenditure which, combined with a relatively softening in overall economic conditions, resulted in the subsequent decline in sales of equipment.

The overall decline in sales, although modest, reflected a moderating in the demand for dental services over the short-term.

With respect to a regulatory response to increase sales, the Australian Dental Industry Association (ADIA) does not believe that one is appropriate. The regulatory standards for dental products in Australia are based on a risk management approach designed to ensure public health and safety, while at the same time freeing industry from any unnecessary regulatory burden. Although there is the opportunity to streamline the process and accelerate the move towards international harmonisation and benefits naturally flow, these are medium to long-term policy priorities.