



Gum recession and options for treatment

The causes of gum recession....

Gum recession is a common problem that can arise from a number of different causes. The frequently held belief that gum recession is the result of a horizontal scrubbing technique with a firm toothbrush has been used for many years to explain this problem to patients. However, there are other causes that are more common nowadays as less people scrub their teeth and gums causing damage, due to greater dental education and the wider use of electric toothbrushes.

Many young patients undergo orthodontic treatment to correct uneven or crowded teeth and thereby improve their appearance. However, sometimes, the final even arch of teeth and improved appearance is the result of teeth being moved a significant amount from their previous position. If this movement is extensive, the roots of the teeth may sometimes be positioned outside the bone “envelope” of the jaw bone. The result is roots covered only by soft tissues.

Inflammation leads to recession....

While initially the gum looks good around the teeth in their new position, with time, and with less than ideal plaque removal, the gum margins may become inflamed. Without the support of bone beneath, the result is recession of the gum away from the crown of the tooth. This is often accompanied by the development of temperature sensitivity and may be unacceptable from an appearance point of view.

First eliminate inflammation....

There are a number of ways in which gum recession can be treated depending on the degree of recession and the underlying cause. However, before any treatment is provided, it is extremely important to resolve any inflammation in the soft tissues of the gum, and not try to correct the recession defect surgically until the gum is entirely healthy.

Laser therapy for minor recession....

Minor recession with thick gum tissue adjacent to the defect may be successfully treated using a laser to encourage the thick tissue band around the tooth to become a little wider. This is only successful in minor defects and only in well selected cases. Incorrect case selection may result in the recession defect becoming more severe.

Surgery for more severe recession....

More pronounced recession defects usually require the grafting of a thick connective tissue around the exposed root and the margin of the thin receded gum brought back into its pre-recession position. This type of surgery is often referred to as a connective tissue graft.

The graft donor tissue is most commonly harvested from the deep surface of the palate. This tissue is rich in collagen and elastic fibres, as well as blood vessels. The donor graft must be transplanted quickly from its harvest site to the new graft site to minimise the drying effect once it has lost its blood supply. The site receiving the graft is called the recipient site. Here the gum is prepared by creating an envelope space within the gum around the tooth or teeth where the recession is located. The connective tissue graft is then inserted into the envelope space and sutured into position carefully, using fine stitches. Then the gum margin is advanced back to the correct position around the tooth or teeth covering the graft and stabilised with more stitches.

This basic procedure described above, using the patient’s own connective tissue from their palate, has been successful in achieving very good root coverage and excellent aesthetic results.

Alternative grafting techniques exist using other graft tissues. The graft may be taken from an organ donor. The connective tissue then has all the protein and epithelial cells removed, it is then sterilised and finally freeze dried. This material has been used for many years now for the treatment of burns with very successful outcomes. The material was then investigated as a suitable connective tissue graft for gum recession defects. Surgical procedures have been refined over time and now an excellent outcome can be provided using this human derived connective



tissue matrix. The major benefit to this technique is the reduced surgical time and the avoidance of a second surgical site with additional discomfort after surgery. Only the recession defect receives surgery and therefore generally patient's recovery is quicker.

Some patients are not keen to receive a human donor graft from another person, and in such cases there is the option to use a synthetic graft of collagen obtained from pig tissue. These grafts are used successfully and like the use of another human donor, the lack of protein within the graft leaves it incapable of initiating a tissue rejection response.

Degree of recession can vary....

Recession can affect anything from a single tooth to a large number of teeth. There is a limit to the size of the graft that can be harvested from the palate, and therefore in the more extensive recession cases, it is best to use either a human donor graft or synthetic grafts.

At NQ Surgical Dentistry, Dr Colin Priestland has attended training in this technique and was taught by Dr Edward P Allen DDS PhD, the surgeon who developed the technique for the use of human donor grafts. This is now an accepted technique and has been in use for a number of years in the United States of America. The graft material, called Alloderm, is obtained through the Therapeutic Goods Administration from BioHorizons Australia. The grafts can be supplied in a number of different sizes catering for recession defects of all sizes.

The clinical results of the cases treated have been very satisfying. The most extensive recession defects present greater difficulty and generally the results are good, although full root coverage cannot be expected. The main benefits in severe cases are a reduction in the extent of the recession defects and the development of thick fibrous tissue around the recession defect that resists future additional recession. The degree of root coverage varies depending on the blood supply to the graft and on the viability of the thin tissue flap that lies on top of the graft. More minor defects however can be treated with considerable confidence and exceptionally good results are achieved, often achieving almost complete root surface coverage.

For more detailed assessment and to discuss what options exist for improving recession defects around teeth, contact us to arrange a consultation with Dr Priestland.