

The Editor
South African Dental Journal

Dear Sir,

Dr S Singh is to be congratulated for publishing a paper in the July edition of the SADJ entitled “*Localised vertical relapse following orthodontic correction in young growing patients with cleft lip/palate: Case studies potentially leading to a revision of the retention protocol.*”¹ It is unusual to report on a problem rather than a success.

With the understanding that Dr Singh has identified a difficulty, I would like to suggest a protocol that may help the retention process in patients who have had bone grafting in the line of the cleft with subsequent orthodontic alignment of incisor teeth into or adjacent to the graft.

Kaare Reitan² beautifully described the histology of orthodontic tooth movement, a work which included recognition of the simultaneous stretching of the dento-gingival and trans-septal fibres which occurs in the direction of the de-rotation of malpositioned teeth. Later, Edwards³ demonstrated that a circumferential dento-gingival and trans-septal fibre cut of 3mm into the periodontal ligament space greatly enhanced rotational stability. This very minor surgery reduces the tension in the stretched supra-alveolar collagen and elastic fibres which subsequently re-attach to the tooth in a normal relaxed state within a few days. This principle could be applied in Dr Singh’s patients where orthodontically aligned teeth associated with bone grafting become unstable due to the increased network of collagen and oxytalan fibres associated with the healing process.

The steps to be taken include orthodontic alignment during which the affected teeth should be extruded a little further (0.5mm - slight over treatment) than the planned final positions to stretch the supra-alveolar fibres. The case is stabilised for four weeks, and then the circumferential fibre cuts are conducted. The teeth will become mobile which is a sign that the dento-gingival and scar tissue fibres have been successfully severed. The teeth should then be rigidly tied to a finishing wire for at least 6-8 weeks, although the mobility returns to normal levels within a day or two. The free gingival fibres readjust and heal in unstressed positions. In order to test the rotational stability of the de-rotated teeth the finishing wire is released from the teeth for a further 6-8 weeks. If the teeth relapse (an outcome which is usually minimal if anything). Should relapse be evident, then consideration can be given to repeating the process.

This technique has been successfully used to prevent palatal relapse when severely palatally impacted canine teeth were surgically exposed and orthodontically aligned. Circumferential dento-gingival fibre cuts as described by Edwards³ may be helpful in preventing the vertical relapse which is described in Dr Singh’ paper, thereby reducing the necessity for lifelong retention.

Yours sincerely,
Prof A McCollum
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References

1. Singh, S. Localised vertical relapse following orthodontic correction in young growing patients with cleft lip/palate: Case studies potentially leading to a revision of the retention protocol. <http://dx.doi.org/10.17159/2519-0105/2017/v/72no6a4>.
2. Reitan K. Tissue rearrangement during retention of orthodontically rotated teeth. *Angle Orthod.* 1959; 29: 105 -13,
3. Edwards JE. A surgical procedure to eliminate rotational relapse. *AJO DO.* 1970; 57: 35-46.

SADA

Annual General Meeting (AGM)

Notice is hereby given that the 18th Annual General Meeting (AGM) of the South African Dental Association (SADA) will be held on **Thursday 15 March 2018, 18:00 at the SADA Head Office, 31 Princess of Wales Terrace, Parktown, Johannesburg**

The Agenda for the meeting will be posted on the SADA website. The meeting will be followed by snacks and refreshments.

SADA is your Association and your voice counts.

KC Makhubele
 Chief Executive Officer

