

TEACHING AIDS

COLLECTION OF TEACHING CASES*

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Keywords: Collection, treated cases, patient histories

A collection of treated cases has been compiled for use by the demonstrators in the Orthodontic Section, Faculty of Dental Science, University of Melbourne.

An explanation of what this collection is comprised of and how it is used follows.

The collection consists of study models and short patient histories of 300 treated cases stored in a reserved area. These cases are classified by type, their box number is supplied and each demonstrator is given his/her personal copy of the contents of the collection.

The short histories are on laminated cards. The lamination prevents the cards from being marked and bent during handling. Each demonstrator has been given a photocopy of the histories so he/she can study the cases at leisure.

Keeping a collection of radiographs intact, when it is used by nine demonstrators, is difficult and so radiographs have not been supplied.

The models usually show before and after treatment and frequently models some years out of retention are included. Many of the cases have been treated with English type removable appliances, copies of which are stored in the study model boxes.

The teaching session lasts three hours. In my teaching session patients are seen during the first two hours : the last half to three-quarters of an hour is spent discussing a theme.

The students know in advance what this theme will be. Notes are also supplied. The study models, which are laid out at the beginning of the session are related to the week's theme and help explain the notes.

The study models are useful to occupy the students during the time that I examine and treat patients. Having the study models on display reduces the amount of flat time for the students, i.e. time when the students are not gainfully occupied.

In the seminar time, at the end of the session, because I assume that the notes have been read previously, the theme is discussed using the study models primarily. If time runs out, as frequently happens because patient care is the first priority, I feel that the students' education has not been compromised because they always have adequate time to examine the models during the flat periods, and the notes describe the topic comprehensively.

Both the classification used (Figure 1) and the layout of the classification are shown (Figure 2).

*Editor - this material helps to reduce one of the major problems in undergraduate orthodontic education as raised by Professor Freer in the Interview

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Figure 1. Page-index of cases, classified by type

	Study model number	
Diastema		
DXXXXXXXXX,	Silvana	205,206
MXXXXX,	Quentin	263,264
Extraction of 6s		
BXXXX,	Peter	78
CXXX,	Sally	151
GXXXX,	Gary	152
LXXX,	Malcolm	52
MXXXXXXXXX,	Martin	155
HX,	David	224
NXXXXX,	Tony	49
SXXXXX,	Evelyn	59
TXXXXXX,	Dennis	127
WXXXXXXXX,	Sharyn	115
Extraction of 7s		
BXXXXXXXXX,	Ronald	138,139
BXXXXX,	Annette	169,170
DXXXXXX,	Lesley	113,114
Impacted cuspid		
GXXXXXXXX,	Marita	279
MXXXXX,	Susan	79
TXXX,	Susan	129,130
WXXXXXXXXX,	Dianne	141

Figure 2. Contents of a typical page of the collection

CLINICAL AIDS

Begg archwires for surgery cases

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Keywords: Begg appliance, ribbon archwires, orthognathic surgery

The Begg technique has been criticised for its inability to provide adequate stability during inter-maxillary fixation. This is largely due to the fact that the Begg technique traditionally uses round wires in all stages of treatment commencing with 0.016 inch round Wilcock wires and finally terminating in 0.020 inch round Wilcock wires in Stage III. Even in surgical cases, the heaviest wire used is usually 0.020 inch. Round wires in a Begg slot lack the ability to control bucco-lingual torque. The author prefers to use ribbon archwires* or square archwires# (0.020 inch x 0.020 inch) to control the torque in the premolars and anterior teeth (Figure 1). These ribbon archwires (Figure 2) are placed in after the 0.020 inch round wires. Four to six weeks after inserting these ribbon archwires to allow the archwires to fully express themselves in the bracket slot, these wires are removed and impressions together with facebow records are taken for model surgery. The ribbon archwires are then replaced in the mouth and surgical Super High Hat™ pins* (Figure 3) are used to secure the archwires to the brackets. The use of the stainless steel super high hat pins negates the necessity to solder or crimp surgical hooks for intermaxillary fixation. To maintain rigid molar control, cold cure acrylic resin is placed inside the tubes to maintain a rigid tube to wire adaptation (Figure 3). These buccal tubes are then replaced once the intermaxillary fixation period is over. An alternative to 'acrylating' the buccal tubes is to use the combination ribbon arch-Begg molar tube* comprising of a Begg 0.036 inch x 6.2mm round buccal tube and a ribbon arch slot of 0.018 inch (horizontal) x 0.025 inch (vertical) x 5.5mm.

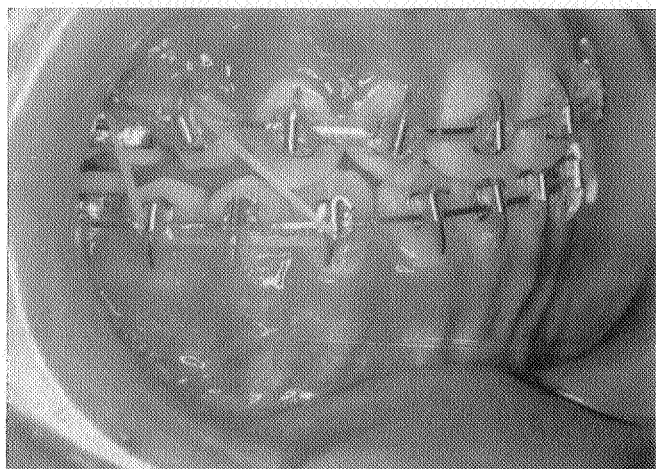


Figure 1. The use of ribbon archwires to control premolar, canine and incisor torque in surgical cases

The use of ribbon archwires in conjunction with the surgical wafer ensures proper 'rigid' fixation at the occlusal and coronal level. The fixation at the dental level has to be adequate to complement the osseous fixation of our surgical colleagues.

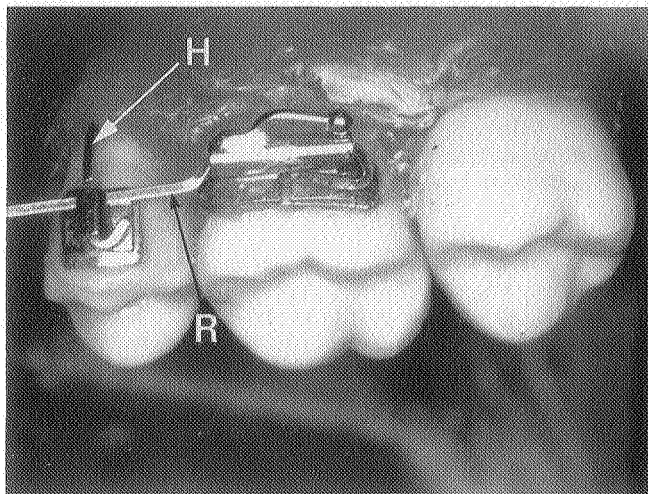


Figure 2. Stainless steel surgical High Hat pins (H) used to engage ribbon archwire (R) into the Begg bracket shown on typodont

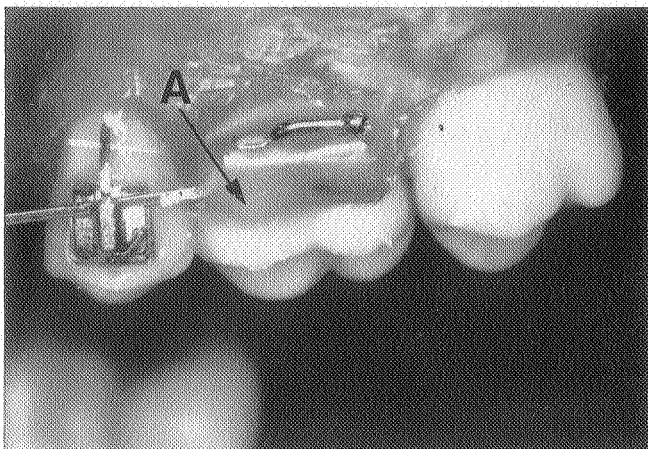


Figure 3. The placement of acrylic (A) resin into and around the round buccal tube ensures proper archwire to molar tube adaptation in surgical cases. This illustration is demonstrated on a typodont.

Rebonding brackets

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MeSH words: orthodontic appliances

Keywords: rebonding, auxiliary archwires

Rebonding of a bracket which has become detached when a square or rectangular archwire is in place (and the tooth has not moved) often results in the bond being positioned in a new place such that the wire cannot be tied in without

*TP Orthodontics Inc., La Porte, Indiana 46391, USA

#Tomy International Inc., Chiyoda-ku, Tokyo 101, Japan

significant force. The effort to engage the bond may then dislodge the rebonded bracket.

Alternative procedures such as a compensating bend in the archwire or employment of a lighter archwire usually prolongs treatment. The following suggestion may help overcome this problem. Two sections of a preformed 0.016 x 0.016ins (0.41 x 0.41 mm) archwire are necessary - one extending from the second premolar on one side to the lateral incisor on the other side, the second piece is a straight wire that passes through the buccal attachments of the two premolars and the first permanent molar.

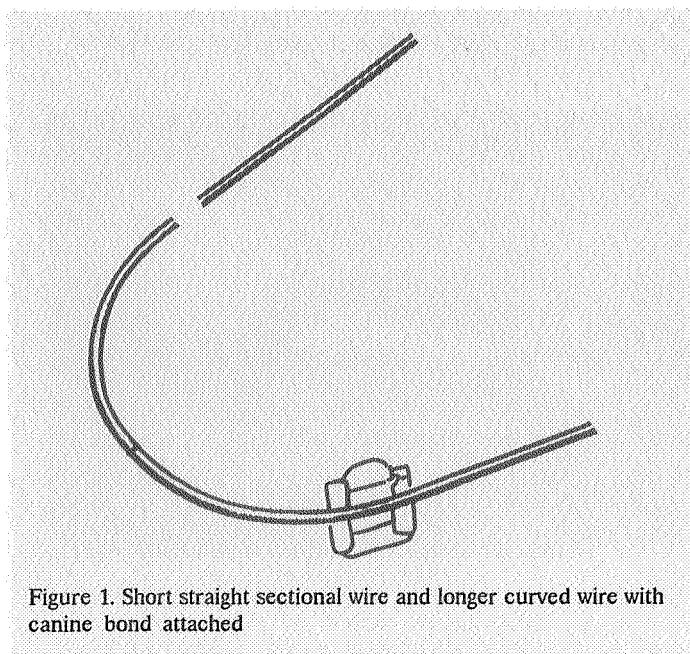
The larger section is used when replacing bonds on the first four teeth in the quadrant and the straight section for replacing bonds on the second premolar.

The bracket to be rebonded is attached with an elastomeric module to the appropriate sectional wire, in the correct part of the arch (Figure 1). The tooth surface is prepared and the dental nurse applies the bonding material in the usual manner.

The orthodontist then engages the archwire in the archwire slots and holds the bonding bracket against the tooth.

It is more difficult for the nurse to clean excess bonding material away from the bracket as it is setting, for the archwire impedes her access to the tooth. The author always holds the bond in How's pliers so the elastomeric module does not make it difficult to hold the bond.

When the bonding material has set a pair of stabilising modules are tied on the adjacent teeth. The orthodontist can then work on the other arch as the bonding material undergoes further polymerisation.



Simulation for artistic trimming

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Keywords: trimming (manicuring)

Following removal of fixed appliances and when into retention, it is often desirable to reshape incisal edges to further enhance dental aesthetics.

A black spirit-based felt tip pen is useful for visualising the incisal trimming prior to actually reshaping

the teeth. The ink can be removed from the teeth with alcohol.

This 'optical illusion' of actual incisal trimming is useful in demonstrating to the patient and parent the dramatic improvement which can be achieved. It likewise brings the patient and parent into the actual treatment procedure in that they can be given various options prior to reshaping the teeth.



Figure 1. Settled occlusion



Figure 2. Edges marked with black felt pen



Figure 3. Completed reshaping