

SUMMARY OF INFORMATION GAINED FROM SURVEY RELATING TO MATERIALS AND AIDS USED IN THE BEGG TECHNIQUE.

R. F. H. RICKLEMAN, B.D.Sc. (Q'land).

INTRODUCTION.

There is a tremendous range of materials available in orthodontics to-day and through trial and error and/or recommendations from associates, one arrives at a particular favourite for a specific task. Since attending the second Begg Course, this material jungle has been a constant challenge, as it relates to the technique I follow in my daily routine. It is impossible for one operator to try and assess the relative merits of the many brackets, molar tubes, elastics etc. available from our catalogues. Consequently, in October, 1966, a questionnaire was circulated by me to all who attended the two Begg Courses conducted in Adelaide in the hope that the knowledge gained would be of interest and benefit to all participants. Although the questionnaire was directed towards the main materials used in the Begg Technique, the information gained is of general orthodontic interest.

Of the 45 questionnaires distributed, 33 returned completed forms. This is a 73% response which I feel is good, considering the amount of time necessary by each individual to complete the questionnaire. The number of 45 was arrived at by contacting the participants of the two Begg Courses conducted in Adelaide in 1963 and 1965, and only those resident in Australia and New Zealand were approached.

The broad nature of the questionnaire makes an accurate statistical analysis of the data impossible. The object of the investigation is to determine to what extent preformed materials are used as applied to the Begg Technique, and which are meeting with the most favour. The results are set out under the same headings as the questionnaire.

1. Preformed Bands.

- 55% are using Rocky Mountain preformed bands.
- 21% are pulling up their own.
- 14% are using Unitek.
- 5% are using Ormco.

3% are using Dentaaurum.

2% are using International Purchasing Company.

A closer look at individual teeth shows that 15% still pull up their molar and canine bands, while 30% pull up bicuspid and incisors.

Although Rocky Mountain has an overall 55% following, Unitek canine bands met with favourable comment, and they have a 25% following. The users of Dentaaurum and International Purchasing Company molar bands have found their products to be of satisfactory quality, and of a competitive price — this applying particularly to the latter.

As a large percentage are purchasing their bands (other than molars) with the brackets prewelded, this determines the band bought.

2. Wire for Archwires.

Wilcock wire used by all, with Remanit, Temco Wire Co., and R. M. Elgiloy being employed occasionally by a few operators.

A breakdown on Wilcock finds regular plus and special, by far the most popular as an all purpose wire. Those using special plus (9%) mentioned that once you have a good coil that it is the best, but breakage during bending occurs frequently with some batches.

Some workers use the softer wire for looped arches and then the higher grade for plain arches particularly where there is the possibility of occlusal interference (e.g. deep overbite cases).

3. Molar Buccal Tubes.

Rocky Mountain and Unitek (with mesial hooks) are the most used, followed by Dentaaurum, and quite a few fashion their own from tubing from various sources. From the general comments, Unitek (round and oval) with hooks seem to be favoured due to their strength and large welding surface.

4. Brackets and Lock Pins.

Quite a few workers are using two or more brackets with Rocky Mountain commanding 48%, Orthodontic Supplies (Sydney) 20%, T. P. and Chun Hoon (Unitek) 12% each and the remaining 8% distributed between Remanit, Wilcock and Unitek (Unipoint) and Ormco.

A closer look at Rocky Mountain brackets shows a third use A83 (short flange) solely; a third prefer A84 (high flange) while the remaining third use both. From the comments, a preference for A84 for the upper, and A83 for lower arch is evident. Other comments were — A84 better to control rotations, and for stage 3 set up, while A83 better for lower incisors, as less tendency to occlusal interference. These comments can be applied to the pros and cons of high flange versus short flange, regardless of manufacturing company.

Orthodontic Supplies (Sydney) has the next largest following and both short flange and long flange bracket is marketed. A criticism of these was that they were a little "soft," and of course not available welded to preformed bands.

T.P. has a 12% following, and the high flange incorporating a tapering incisal margin (256) met with favourable comment. However, a criticism was that binding took place and brackets had to be "opened out." 12% use Chun Hoon brackets (Unitek).

One operator is using the new Unitek Unipoint bracket and his initial experience is favourable particularly with regard to lack of binding, and ease of ligating. However, they are a little bulky and this is a disadvantage, particularly in lower anterior area.

Lock pins as prescribed by the manufacturers for the particular bracket being used is only adhered to by 50%, while the other 50% use a different pin. The most popular of the latter are T.P. Safety (their .014) and Wilcock. The users of Rocky Mountain brackets have the greatest tendency to use a different pin other than that made by R.M. Brass is the material of choice by all. Six workers, however, prefer to use stainless steel when using an anterior elastic. This seems a good way to minimise broken pins when these are used as hooks.

5. Elastics.

Two broad types in use, namely:—

- (a) brown rubbers, and
- (b) latex elastics.

In the breakdown, 40% are using latex only, 30% rubbers only, and 30% are using both. There seems more dissatisfaction with the rubbers on the grounds of bulkiness, appearance, hygiene and in particular inconsistency. The most favoured are the standard from Coombes, England, and superior from Hogbin, Sydney.

Of the latex elastics, Appco gets favourable comment on the grounds of consistency. The lack of breakages and the employment of a "force over length" chart takes a lot of the guess work out of forces being employed. Rocky Mountain latex are widely used, but many have found too many breakages and an inconsistency of pressure a big disadvantage. Unitek latex elastics also met with favourable comment.

6. Photography.

Ten (10%) don't use photography at all, while 20% do only extra oral photographs. Generally, most prefer black and white prints for extra oral, and colour slides for intra oral. Only a few discussed their equipment, so no dissection has been done here.

Typical comments were that photographic records were useful mainly as a means of communication between colleagues, and that study models and cephalometrics were the main diagnostic treatment tools.

7. Other Aids and Auxiliaries.

(a) Uprighting Springs.

30% use T.P., 30% make their own from Wilcock wire, 40% purchase theirs from Adelaide (apparently three sources here). The standard of all these seems to be satisfactory.

(b) Lingual Buttons, Eyelets, Hooks, etc.

All are being extensively used. Where rotations are necessary, buttons are preferred, but many have commented that they are using less buttons and using more lingual spurs, hooks, Wilcock saddles or eyelets instead. The reason being that buttons are too small, and come off too easily. Unitek buttons and R.M. lingual spurs were praised.

(c, d) Separation.

Soft brass wire is very popular, with favourable comments about T.P. separation springs for molars. Separation rings or elastics are used by 36%, the ease of insertion makes these popular. A disadvantage is the associated tenderness of the teeth, and one worker recommends removing these the day before fitting bands.

For immediate separation the Mizzy hand separator was mentioned as very effective.

SUMMARY:

On collecting the above information one soon realises the tremendous range of materials available and the keen competition between the various manufacturers can only lead to better products. However the right of selection remains with the orthodontist and perhaps this survey will help guide us in our choice. The purchasing of preformed bands with attachments prewelded is becoming more popular, and this means a big initial investment to procure a sufficient range and stock. One therefore will not make a major change unless he feels a far superior product is available.

The strong following for Rocky Mountain products in particular must in part stem from the presence of an Australian Agency, with the result that a majority of those taking part in this survey have not tried other products. As ordering direct from U.S.A. is not difficult, this is quite surprising.

The result of a survey carried out in U.S.A. by Dr. Barrer was published in the Begg Jour-

nal, 1964. This involved a very comprehensive questionnaire and 238 replies were received or an overall 65% response.

Of interest to us is the section relating to materials, and this gives us a comparison. The breakdown is as follows:—

1. Brackets.

42% T.P.
27% R.M.
21% Unitek.
10% Other sources.

2. Wire.

87% Wilcock.

3. Elastics.

67% Unitek latex elastics.
16% Betta Rubber elastics.

4. Preformed Bands.

75% use preforms with molar bands the most commonly used. No clear conclusion could be drawn as to which company make the most satisfactory bands. Unitek and R.M. lead the field with a slight preference for R.M. for all types. Ormco anterior and bicuspid bands were close contenders.

An interesting point is that in both surveys most complaints seem to be directed towards elastics. On choice of wire there is agreement, and about 75% of both groups use preformed bands. There is a big difference in bracket selection between the two groups and I feel the reason for this has been explained.

406 Queen Street
Brisbane.