THE

WASHINGTON ORTHODONTISTS READERS DIGEST

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By

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THE SCOOP:

The ROBERT TAYLOR'S announced the arrival of a 6 lb. 14 oz. boy on August 22, at 8:55 a.m. Congratulations Bob and Georgia. JIM BARNES announced the opening of his office at 929 Manor Drive, Jefferson Village, San Antonio 1, Texas. If you want his phone number we will send it to you. Jim also mentioned that he had received the bulletin and enjoyed reading it. Thanks Jim. Apparently, the practice seems to be going along quite well from the card we received from him. MIKE and AL BAUM announced the arrival on June 11, of a baby boy. How many does that make now, Al? Doctor KEN ORMAN announces the removal of his practice to Suite 26, Medical Center, Corpus Christi, Texas, and also mentioned that he appreciated the WORD. Ken noted that he had become a member of the Tweed Study Group of the Southwest. Also said that he met DUB SCHOVERLING and JIM BARNES at a meeting in Dallas of the Tweed Study Group. Note that the BAXTERS are the proud parents of a bouncing baby girl, or at least we expect that it bounces. PAUL and VIRGINIA LEWIS have found that new house that they have been looking for. They live up on Magnolia with an excellent view of the City of Seattle, particularly at night. GENE BUTORI, GUY WOODS and DENNY REES have combined forces and now are producing orthodontics on a group basis. DICK FAILOR has settled down in Olympia, Washington. PAUL STEPHENS and family are well settled and happy in Oregon and RAY McNAIR was so busy that he wasn't able to attend the last Angle meeting in Yakima. The Pacific Northwest Component of the Edward H. Angle Society of Orthodontia admitted six new members; some of the names may be familiar to you: DAN EMPENGER, GERRY DOHNER, KEN KAHN, BILL TAKANO, CHARLIE CRAIG and BILL GILMORE. AL MOORE has been busy lecturing here and there, one of his latest as featured speaker at the Denver Seminar. We have ten new boys in the orthodontic class this year:

Blaine S. Clements	San Francisco, Calif.
Roland M. Davis	Glendale, California
Russell P. Esposito	San Francisco, Calif.
Robert E. Foster	Bellingham, Wash.
Sherwood E. Gatti	San Antonio, Texas
Charles W. Hasstedt	Long Beach, Calif.
Wayne L. Peay	Morenci, Arizona
John G. Raynes	Tucson, Arizona
Robert E. Washbon	Fullerton, Calif.
C. Rolland Woofter	Cleveland Heights, Ohio

New addresses:

Bob Willis	2740 Fulton Ave., Sacramento, Calif.
Bill Takano	Lt. William S. Takano, Bldg. 254, Room 204, U.S.N.S., San Diego, California.
Ken Orman	Suite 26, Medical Center, Corpus Christi, Texas
Jim Barnes	929 Manor Drive, Jefferson Village, San Antonio 1, Texas.

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A little note taken from the July 1954 issue of the American Journal of Orthodontics: Some of the information that might well be passed on when referring a patient to another orthodontist:

1. The patient's name and address.
2. Parent or guardian.
3. Person responsible for payment of account.
4. Length of time under active treatment.
5. Resume of treatment plan.
6. Present primary objectives.
7. Supplementary appliances used such as headcap, elastics, etc.
8. List of enclosed history data, such as casts, x-rays, photos, etc.
9. Financial arrangements made for treatment.

Ken Kahn says:

If you haven't tried the Anodic polisher as an invaluable aid in the handling of steel appliances you are missing out on something unique. In our office it has enabled us to use Edgewise arches sooner, and fewer, less stable, round wires. This, we think, is the essence and the beauty of the Edgewise appliance. Here are a few applications you might consider:

The placing of the first Edgewise arch often results in a snug fit and considerable discomfort to the patient. Reducing and polishing for thirty seconds before placing the arch will greatly reduce discomfort and annoyance. The final snug fitting stablizing arches need not be reduced, merely polished. Moving teeth along an arch, as lower cuspids tied back with coil springs, is a simple matter when the anterior segment only has been brightly polished, leaving the buccal segments unchanged for maximum anchorage.

The initial distal movement of the anterior segments with closing loops is usually a problem of maintaining anchorage, while detorquing the centrals and laterals. Thirty seconds or more of reduction and polishing of only the anterior segment is a neat solution. Later, during final space closure or when maximum torque is desired in the anterior segment, reverse the procedure with an .0215 by .028 arch and reduce the buccal segments only to relieve the snug fit and the discomfort of such a heavy arch.

Occasionally when anterior bands are placed, following the retraction of cuspids, the previous arch may be reduced in the anterior segment only and replaced, without the time necessary to make and heat treat a new light arch.

Finally, remember that regardless of the flux used, all soldering operations are easier when the archwires are clean. Several seconds of anodic polishing is all that is needed. This is especially true when adding to archwires that have been worn and would otherwise have to be cleaned and polished by some other method. At present we are using the Anodic polisher that is sold by Rocky Mountain Metal Products in Denver, Colorado. The solution is 85% ortho phosphoric acid, reduced slightly with water. There are several other formulas available upon request from the manufacturer.

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THE HUMOR DEPARTMENT: from BILL McGOVERN, SR.

1. Have you ever tied up the lower arch on a busy afternoon and when the last second molar tie was placed the band came loose.
2. Take off the upper central band after the case had been finished and have a white ghost staring you in the face.
3. A small girl having her mouth washed with the spray gun said, "is that an enema?"
4. Have the dentist extract the wrong tooth.
5. Have one of those steel archwires with all the attachments fall into two pieces just about the time you are putting it in for the last time. (Will somebody tell me what makes that steel corrode)

Another cute one that I heard the other day: Salesman: "I represent the Mountain Wool Company, mam, would you be interested in a few coarse yarns?" Housewife: "Gosh, yes, tell me a few."

Root Resorption in Human Permanent Teeth

Following is a summary of an article by Maury Massler and Anthony J. Malone in the August 1954 issue of the A.J.O.:

Under summary and conclusions the following:

1. One-hundred percent of the persons examined showed some evidence of periapical resorption in one or more of the permanent tooth roots.
2. 86.4% of the people examined showed evidence of some resorption. Only 1.6% of the teeth revealed no evidence of resorption. The remaining 12% of the teeth were questionable.
3. An average of 16 teeth per person showed some evidence of periapical resorption. There were no particular differences between males and females.
4. There were no significant differences between the numbers of maxillary and mandibular teeth effected. The resorptive pattern was generally bilateral.
5. In only 5% of the teeth was there any evidence as to the cause of resorption, i.e., periapical infection and root canal therapy. In 81.2%, no reason for resorption was obvious.
6. There appeared to be a significant increase in the frequency of more severe degrees of resorption with age.
7. Intra-oral roentgenograms of 81 orthodontically treated patients were also assessed. It was found that the number of teeth resorbed and particularly the severity of resorptions were markedly increased by orthodontic procedures.
8. A sample of 76 cases treated orthodontically, a good prediction as to the degree of root resorption after orthodontic treatment could be made by analysis of the roentgenograms taken before treatment. This prediction was more accurate when individual teeth were assessed before and after treatment than when the case was assessed as a whole.
9. It is concluded that a definite resorptive potential is resident in the permanent as well as the primary teeth of all persons. This resorptive potential varies in different persons and also in different teeth of the same person. Resorptive potential is found to be inherently high in approximately 10% of this sample. This figure correlates well with approximately 14% of the teeth that showed severe degrees of resorption after orthodontic treatment.

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Apical Root Resorption Under Orthodontic Therapy

By Dr. John R. Phillips

The material used included 69 sets of intra-oral x-rays, 54 selected from the records at the Orthodontic Clinic of the University of Washington, and 15 sets from private practice. The total number of teeth counted was 1,745, all of which received the Edgewise appliance and continuous arch technique. Of the 69 cases, 43 were four first bicuspid cases, 2 were upper first bicuspid only and 3 were extraction cases involving teeth other than bicuspids; 21 were non-extraction cases. Third molars were not included in the total number of teeth counted. No mixed dentition cases were included. The data chart was estimated using the following criteria for the amount of apical root loss:

Slight, that is minimum resorption of the root apices.
Moderate, up to approximately 1/4 root length loss.
Excessive, over 1/4 root length loss.
Questionable, possible traces of resorption, not positively identifiable because of distortions due to film placement or difference in x-ray cone angulation.

Lateral head x-rays were used to supplement this study in establishing tooth movement and also checking on incisor root loss.

A summary of the work by Phillips includes the following:

1. The incidence of apical root loss in the great majority of cases both as to the number of teeth involved and the degree of tooth involvement can be attributed to orthodontic appliance forces during treatment.

2. Except in extreme cases, numerically few, the degree of root loss is regarded as clinically insignificant and not endangering the life or function of the dentition.

3. No sex difference was discovered in the amount of apical root loss.

4. The age of the patient at inception of treatment was found not to have any correlation to the amount of apical root loss.

5. No correlation was noted between the amount of apical root loss and the length of treatment.

6. No correlation was demonstrated between the amount of apical root loss and the amount of movement of the tooth through bone.

7. Some metabolic factor, endocrine, dietary or other is suggested in the more extreme cases of apical root loss.

8. Documentation of the metabolic factors, endocrine and dietary, in the literature at the present time, is insufficient to regard them as definite etiological causes of apical root resorption. More research is necessary to establish any positive correlation between them and apical root loss.

9. An injured tooth, evidenced by crown fractures or root deformity shows a greater predisposition to root resorption than the uninjured tooth.

10. It is possible to cause a deflection of the epithelial sheath of developing tooth roots due to orthodontic intervention. A loss of potential root length possibly may result from this deflection.

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We will follow this with a summary of a thesis by Don Baxter from the University of Washington, Department of Orthodontics.

A Roentgenographic Investigation of the Effect of Orthodontic Treatment on the Relation of the Alveolar Bone Proper to the Cemento-Enamel Junction

by Donald H. Baxter

Materials. Intra-oral bitewing roentgenograms from 63 completed orthodontic cases were studied. 61 cases were selected at random from the files of the University of Washington, Department of Orthodontics, and 2 cases were obtained from private practice. 15 cases were treated without extraction of any permanent teeth and 48 cases were treated with techniques which included extraction of bicuspid teeth. Measurements of the distance from the height of the alveolar bone proper to the cemento-enamel junction were made on intra-oral bitewing roentgenograms which had been taken immediately before treatment and immediately after treatment. Areas included were: (1) the distal of the cusp (2) mesial of the first bicuspid (3) distal of the first bicuspid (4) mesial of the second bicuspid (5) distal of the second bicuspid (6) mesial of the 6 year molar (7) distal of the 6 year molar (8) mesial of the 12 year molar. The technique used included the employment of a sharply pointed divider and finely calibrated millimeter ruler. In order to determine which part of the cemento-enamel junction was measured a study was made on a dry human skull. Sections of .010 ligature wire were placed at various points along the mesial and distal contour of the cemento-enamel junction of the posterior teeth and standard intra-oral bitewing roentgenograms were taken. It was found that the most occlusal point on the convexity of the cemento-enamel

junction on the mesial and distal of the tooth was the point measured on most roentgenograms. Cephalometric lateral head x-rays before and after treatment were used to study the amount and character of orthodontic tooth movement that occurred in the first bicuspid extraction areas.

Following is a summary of the findings by Dr. Baxter:

A roentgenographic investigation of the alveolar bone proper was made and tested to prove its accuracy. The method was found to be quite accurate. The mean anatomical distance between the height of the alveolar bone proper and the cemento-enamel junction in each case was determined for the group of children aged 10 years to 16 1/2 years before orthodontic treatment was started. The cases were divided into types of treatment, (1) extraction and (2) non-extraction. The effects of orthodontic treatment and the height of alveolar bone proper was determined and the treatment groups compared in this respect. The effect of moving teeth into extraction areas on the height of the alveolar bone proper was studied. Pertaining to this phase of the investigation the amount and character of movement toward the first bicuspid extraction areas of the cuspids and the second bicuspids was determined. Special emphasis was placed on the change in actual inclinations of these teeth effected during and by orthodontic treatment, and the effect of these changes on the height of the alveolar bone proper.

Conclusions:

1. The distance between the height of the alveolar bone proper and the cemento-enamel junction at the mesial and distal of the teeth in the intra-oral bitewing x-ray can be measured within five tenths of a millimeter. This accuracy allows a +10 or a -10 degree latitude or longitude for the angulation of the x-ray beam.

2. A slight general decrease in the height of the alveolar bone proper of less than five tenths of a millimeter was observed following orthodontic treatment.

3. There was no significant difference in the change in height of the alveolar bone proper between the non-extraction cases and in the cases in which first bicuspids had been extracted.

4. Moving teeth toward an extraction area had no specific effect upon the height of the alveolar bone proper. The height of the alveolar bone proper maintained a relatively constant relationship with the cemento-enamel junction, regardless of the amount of tooth movement in orthodontic treatment.

5. When the cuspid and second bicuspid teeth were moved toward each other in first bicuspid extraction cases, their axial inclinations became more parallel and rarely did their crowns become tipped toward each other. No "pocket formation" developed in the alveolar bone proper adjacent to these teeth.

6. Extruding of teeth during orthodontic treatment had no specific effect upon the height of the alveolar bone proper. The bone appeared to follow the tooth and a relatively constant relationship between the height of the alveolar bone proper and the cemento-enamel junction was maintained.

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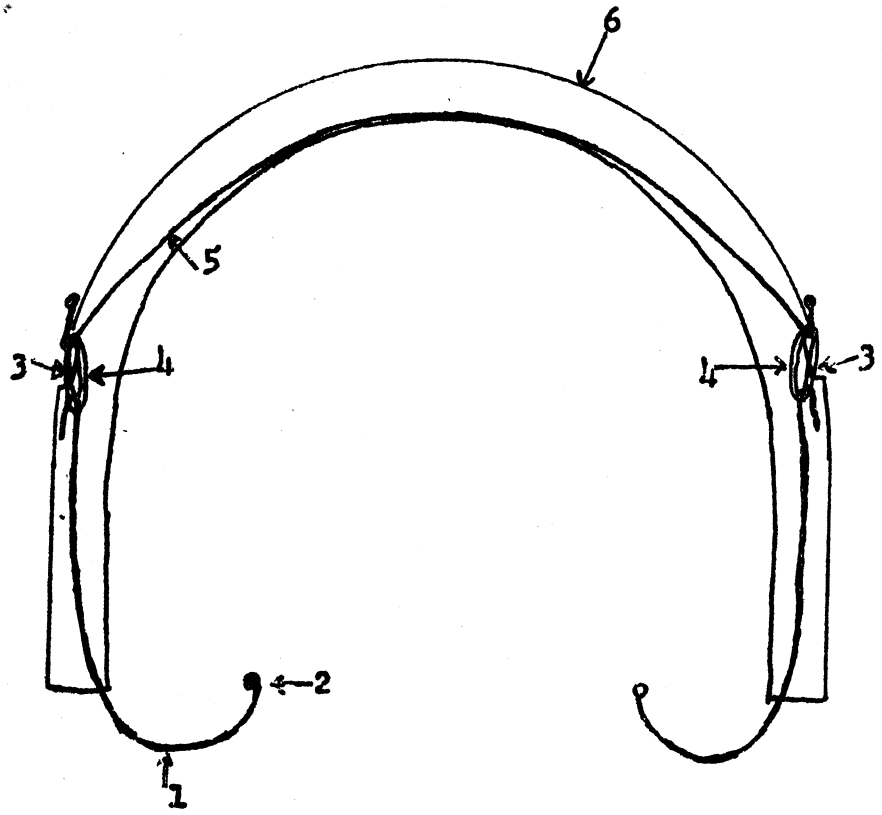
Note on an article by Robert W. Donovan entitled, "Recent Research for Diagnosis" in the August 1954 issue of the American Journal of Orthodontics: One of the four notes which Donovan includes in his article is as follows:

"Clinical experience has shown us the following, 1-2-3 and item 4, depression of teeth is extremely difficult if achieved at all." I guess we will have to send Jack some tracings.



1. .051 H.G. Hook.
2. Loop to fasten onto arch.
3. Aperature cut in side of tubing.
4. Elastic (No. 4x or 6x) From hook to .033 wire.
5. .033 wire inside.

Plastic tube ends bent back upon themselves.

6. Tygon tubing - 1/2" I.D.

Lewis' latest on headgear

Doctor Lewis now is using a large soft plastic tube with a half inch inside diameter in which he cuts a hole behind the ear lobe; an .036 wire is hooked back upon itself and passed through the hole on one side coming out on the opposite side and being hooked back upon itself again. To each one of these hooks elastics are attached (usually a 4x or 6x) which produces a soft gentle pull. Dr. Lewis uses Tygon tubing and indicates that it remains soft and is very comfortable for the patient to wear and, of course, the elastic traction may be increased or decreased by changing the size of the elastics. A diagram above indicates how the headgear is fashioned.

Another new address since we have gone to press is:

Dr. R. O. Failor
Medical Dental Bldg.
21st and Capitol Way
Olympia, Washington