THE

WASHINGTON ORTHODONTISTS READERS DIGEST

Vol. 2 March 1955 No. 1

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Published Quarterly

By

The Orthodontic Department
University of Washington
School of Dentistry
Seattle 5, Washington

THE SCOOP:

We have a note from JOHN DRAKE that he is now associated with Dr. Gerald Milliette and has limited his practice to Orthodontics at 735 No. Water St., Milwaukee, Wisconsin. John also mentioned that he spends half a day a week instructing at Marquette. BILL McGOVERN, JR. is stationed in Washington, D. C. as a member of Uncle Sam's Army. Got a note from SAM BLAKE who says he is going great guns and has heard from ARCHIE PETERSON who also is busy. Sam says he is a member of a study club with Roscoe Keedy as the leader. Sam also said that he would attend the Tweed class next October and that the weather was terrific in California, but that was some time ago, of course. Congratulations to JOHN PHILLIPS and his wife upon the arrival of a new baby boy. We have added a new member to the Orthodontic staff, DR. WAYNE BOLTON, who has been with us for the past several months. We received Christmas cards from several former members of the Orthodontic classes here--Thanks. Got a note from BOB TAYLOR that he is practicing part time in Dr. Faustin's office in Memphis. Saw DON BAXTER and his wife on their way through Seattle to Alaska, where Don will be stationed to run out his time in the service. His address is, 1st Lt. Donald Baxter, 5005th USAF Hospital, A.A.C., APO 942, Seattle, Washington. AL MOORE has been busy lecturing again, recently appearing in Houston, Texas, where he checked with JIM BARNES, KEN ORMAN, DUB SCHOVERLING and MILT YELLEN, and noted that they were all well and busy. Al recently returned from a Teachers' meeting in Chicago, where he discussed the use of the cephalometer in undergraduate teaching. In addition to his traveling, Al has been one of the judges in the Prize Essay Contest and recently had to read all material submitted for that contest. Al also is due to be the Program Chairman for one of the days of the meeting of the A.A.O. in San Francisco in May. GENE BUTORI'S new address is 901 Selling Bldg., Portland, Oregon. In a letter from AL BAUM of March 31, he writes that Mrs. Baum is in her usual convention condition--Pregnant.

Some notes on the graduates of the past class just finished: JOHN ANDERSON is practicing in Portland, Oregon, and affiliated part time with the University of Oregon Dental School. His address is 2015 No. E. 39th Ave., Portland 13, Oregon. GORDON JOHNSON gives us a new address, 2008 Bank St., Bakersfield, California. LOWELL LUNDELL presents a new address, 2231 Cowper, Palo Alto, California. JOE MORAN has moved to Spokane; his address is 306 Paulsen Bldg. DON RUDEE is traveling the world and we have no permanent address for him now. JERRY SCHULZ' new address is 3413 E. 7th, Vancouver, Washington, where he has taken over the practice of AL DONA, one of our former graduates who is now stationed with Uncle Sam somewhere in the service. JIM THURSTON'S new address is 585 Beverly Ave., San Leandro, California. TED WENDORFF has taken over the practice of Dr. John Griffin. His new address is 6381 Hollywood Blvd., Hollywood, California. RUSS VAN DYKE gives as his address 2852 Polk Ave., Ogden, Utah. GENE SUPERNAW is still here with us at the University and his address is 3904 University Way, Seattle, Washington.

The following men from the Pacific Northwest are going to Havana, Cuba, to attend the Tweed Seminar beginning April 17:

Doctors Paul Lewis, Emery Fraser, Bill McGovern Sr., Pete Bishop, George McCulloch, Elmo Tucker, Paul Stephens, John Ryan, Harry Tiedeman, Rudy Gothenquist, Robert DeButts, Bill Gilmore, Gil Miller, Dick Riedel, Ken Kahn, Gerry Dohner and Dan Empenger. Doctors Gothenquist and Lewis are not taking their wives.

At the writing of this issue DR. AL MOORE is in bed with pneumonia. Looks like Al has been working too hard lately.

SEE YOU ALL IN HAVANA.

LEWIS' LATEST:

Paul Lewis' latest is not a new specific thing, but Paul, Pete Bishop and a group of the fellows here in Seattle have been working on a clinic to be presented in Havana consisting of eight typodonts illustrating the various steps in space closure in extraction cases. If any of you are ever in a position where you have to present a clinic including typodonts and if you are thinking about using acrylic, write to us; we might be of some help to you in avoiding some of the errors and mistakes that we have run into.

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KAHN'S KORNER:

Ken Kahn has been so busy preparing an itinerary for the Havana trip and working on the typodonts with the rest of the fellows that we haven't a special note from Ken for this issue. We do have a last minute note to add from Dr. Kahn, however. Dr. Kahn has solved one of his big headaches, that is the problem of writing routine as well as special letters to parents on different phases of orthodontic treatment. Heretofore, many letters have been overlooked that would have saved complications. Now he finds it so easy to dictate a letter to the dictaphone in spare time or even at home because it is readily portable and then someone in the office can transcribe from the disc or it can be sent to a nearby stenographic service. Try a Dictaphone if you are interested.

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RECENT AND READABLE DEPARTMENT.

A thesis by Dr. Joseph Moran, titled, "A Study of Dento-facial Changes Produced by Headcap Treatment in Class II Malocclusions."

This is a pet subject of Dr. Moore and we will attempt to analyse the material, methods and conclusions of Dr. Moran.

Forty-six patients were analyzed, twenty-five males and twenty-one females. The age range at beginning of treatment was from seven years and eleven months to twelve years and eight months in the males and in the females from seven years and zero months to ten years and nine months. Treatment time averaged in the males two years and seven months and in the females two years and zero months. All cases were treated with a typical Kloehn type headgear with an .045 inner-bow and .055 outer-bow. Activation in each instance was made by cervical elastic attachments.

Joe comes to the following conclusions:

1. That the change in molar relation is accomplished through forward growth in the mandible while the maxillary first permanent molars are tipped back and prevented from following their expected downward and forward growth pattern.
2. The first and second bicuspids erupt in a distal direction, closely following the movement of the maxillary first permanent molars.
3. Protrusion of the maxillary incisors is reduced through treatment.
4. Vertical growth of the mandible compensated for the initial bite opening produced by treatment.
5. The results of successful treatment are not accomplished only through a bodily forward repositioning of the mandible.
6. The maxillary denture and alveolar process reveal a retardation of growth in an anterior direction due to headcap treatment.
7. The maxillary and mandibular denture base relationship shows less antero-posterior discrepancy as the result of orthodontic treatment.

8. The convexity of the face generally decreases thus producing a straighter face after treatment.
9. Soft tissue outlines improved considerably.
10. Males and females responded in a like manner to treatment.

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The second thesis to be reviewed is: "A Cephalometric Evaluation of Morphological Variations Presented by the Anomaly Open-Bite," written by Dr. Theodore Wendorff. The subject material falls into two groups:

1. A test group consisting of open-bite malocclusions and a control group of malocclusion cases with no open-bite.

The first test group contained forty-five individuals, twenty-nine females and sixteen males, with sixteen having Class I malocclusion and twenty-nine Class II malocclusions. The ages ranged from ten years and one month to twenty-one years. The control group contained forty-one individuals, nineteen females and twenty-two males, with twenty-one having Class I malocclusions and twenty Class II malocclusions. Age ranged from eleven years to fifteen years, five months.

2. The test group was then divided into sub-groups depending upon the amount of severity in each individual case. Group A included cases ranging from one millimeter to five millimeters of open bite; Group B from five to nine millimeters and Group C from nine to eleven millimeters. An analysis was made from lateral cephalometric radiographs of all of these patients.

The summary and conclusions of Dr. Wendorff's study are as follows:

1. Claims that the anomaly is generally accompanied by either an obtuseness of the mandibular angle or a shortening of the ramus was not born out in this study.
2. Where differences have occurred significant factors that have been involved were associated mainly with tooth position. Evidence would support a theory that open-bite is generally accompanied by a supra-eruption of the buccal teeth. The maxillary occlusal plane has been shown to be significantly lower in the posterior with the mandibular occlusal plane showing an elevation in this region.
3. A significant increase in the lower face height was presented with a percentage decrease noted in both maxillary and mandibular anterior denture heights.
4. Some significant variations were noted in the study concerned with the gonial angle and with the cant of the palatal plane.
5. Overall conclusions have been tempered by the thought that the human face is a composite of a complexity of variables; that the resultant syndrome involved could well be a blending of many factors and that any extreme situation might easily preclude these and previous findings.

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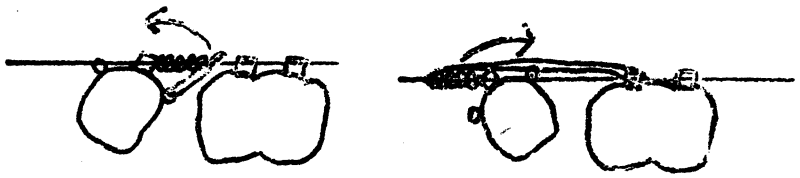
The notes on "Indications for Orthodontic Treatment" are included for possible handy reference by some of the more recent graduates and are added to this issue in place of "Review of the Current Literature."

We have a note from Dr. R. F. Taylor regarding using a coil spring in the rotation of teeth. We are including this because we think many of you will find it handy. Bob says he thinks it is interesting and several of the fellows in the Pacific Northwest area have been using this method of rotation since attending the Tweed Seminar last April.

"Place an activated coil on the archwire on the side of the bracket opposite the direction you desire rotation. Then compress the coil and tie in the staple on that side, letting the ligature run from staple to side of coil opposite bracket."



HUMOR DEPT.

Written by one of Dr. Pete Bishop's patients:

Braces

All that hardware
Makes you feel
You didn't quite swallow
A bicycle wheel.
Your lips puff out
It hurts besides
You can't eat corn on the cob,
You tried.

But worst of all.
There's the eighth grade dance.
And imagine braces -
And Romance!
Your smile will be rapturous
At sixteen
But life's plain poisonous
In between.

Jacobson

Small boy: "Mother, dear, where does the light go when it goes out?"
Mother: "That, Sonny, I don't know, and you might just as well ask me the same question about your father."

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A tall and stately girl is merely a long, lanky girl with money.

GROWTH, ESTHETICS AND FUNCTION IN ORTHODONTIC THERAPY

By Wendell Wylie, November 2, 1954

Wylie studied thirty cases treated by Tweed. In presenting this paper he showed before and after headfilm tracings and photographs. Some were extraction and some non-extraction. Almost all showed excellent soft tissue profiles after treatment (some exceptions). Majority of cases which had protrusive lips were finished with straighter profiles. Wylie's study is an attempt to determine what changes in tooth position are responsible for the net change in soft tissue angle of convexity.

Wylie criticized Tweed's angle criteria of establishing lower incisors to a predetermined angular relationship to the mandibular plane because the axial inclination of the lower incisor can be changed by movement of the crown or the root end or both, therefore, the position anteriorly - posteriorly is still not defined.

Regardless of the above criticism the following are major observations made from the tracings of the cases treated by Tweed:

1. Tweed achieves reduction of lip fullness.
2. Tweed achieves bodily tooth movement. (maxillary and mandibular incisors not without exception)
3. Mandibular growth is obviously important in treatment.
4. Therefore lip changes are due to growth and movement of teeth.

The tracings were studied quantitatively - average figures were obtained for changes in mandibular plane angle: increased 1 1/2.

The greatest factor that was noticeable as Wylie presented the tracings and photos was that the tooth movement alone could not account for the lip changes and in some of the cases remarkable amount of mandibular growth occurred <u>not in the ramus</u> but apparently <u>localized in the condyle</u>.

Wylie thus "stuck his neck out" and stated that he believes that mandibular growth at the condyle is stimulated by orthodontic treatment. He went on to mention that some people might argue against this when it is shown in these cases that S-N-B angle remains relatively fixed in treatment; but opening the bite (as was done in these 30 cases) will effect a smaller S-N-B angle. Therefore, in this group in which the bites were opened condylar growth must have occurred in order to bring about an unchanged S-N-B angle.

Through his quantitative statistical studies Wylie showed the relationship of the following factors to the net change in the soft tissue angle of convexity:

1. Lower incisor (the net angle change to lower border of mandible) no correlation - completely by chance.
2. Change in position of the lower incisor crown - no correlation chance.
3. Change in angle of upper incisor showed a <u>small</u> amount of correlation. (This indirectly may mean that tipping lower incisors back does have an effect in that it allows the distal movement of maxillary incisors.

He concludes that the change in the profile lip fullness was effected by other things and believes it is primarily the condylar growth.

(These notes were taken by Dr. Don Baxter of Dr. Wylie's lecture)

I. Class I.

A. Deciduous Dentition - Conditions possible, 1 - 6 years.

1. Crowding.
2. Spacing.
3. Protrusion - either upper or lower incisors.
4. Crossbites - anterior and posterior.
   Summary of treatment planning - None.

B. Mixed Dentition - $6\frac{1}{2}$ - $8\frac{1}{2}$ years - Conditions.

1. Spacing - no treatment.
2. Protrusion - consider mouth screen - if limited to maxillary incisors (spaced).
3. Crossbites:
   a. Anterior - tongue blade - then guide plane - bands if necessary - particularly if lateral incisors alone are lingually locked.
   b. Posterior - labial arch in maxilla with lingual extensions as far mesially as c/c from bands on 6/6 - mandibular lingual arch - tubes on buccal for possible labial arch - provisions for cross elastic (hooks).
4. Ectopic Eruption - frequently 2/2 distal - Lingual arch - bands 621/126.
5. Supernumerary teeth - to be removed when seen. (May be necessary to expose crowns of certain permanent teeth).
6. Crowding.
   a. Early extraction of deciduous lateral incisors. (Occasionally it is also necessary to remove deciduous centrals which have been retained too long.) Criteria: In any case where the erupting maxillary or mandibular central incisors lack sufficient space for normal mesio-distal alignment the deciduous laterals should be removed and consideration given immediately for removal of deciduous canines.
   b. Deciduous canines should certainly be removed whenever permanent lateral incisors have insufficient space for normal alignment.
   c. Maxillary and mandibular first deciduous molars should be removed quite early (10-12 months after extraction of deciduous canines) to allow the first permanent bicuspids to erupt prior to the permanent canines. This is particularly critical in the mandibular arch.
      Note: Consideration must now be made for the possible necessity of a mandibular lingual arch.
   d. Extraction of first permanent bicuspids upon eruption or near eruption.
   e. Completion of treatment when remaining teeth have fully erupted. BE SURE TO SEE FULL MOUTH X-RAYS BEFORE EXTRACTION OF EITHER FIRST DECIDUOUS MOLARS OR FIRST BICUSPIDS. (In cases where a second bicuspid or both second bicuspids are missing, remove all deciduous molars at step (c) above and place maxillary and mandibular holding appliances).

C. Permanent Dentition.
   1. Extraction - consider mandibular incisors occasionally in cases of extreme crowding or narrowing in mandibular anterior areas - also consider $\frac{6}{6}$ when several molars are very badly decayed or poorly restored. $\frac{6}{6}$
   2. Non-extraction.

II. Cl. II, division 1. Treat females 7-9; males 8-10.

A. Deciduous dentition - No treatment indicated before eruption of $\underline{6/6}$.

B. Mixed dentition. ($6\frac{1}{2}$ - $9\frac{1}{2}$)

   1. Headgear and biteplate combination (Kloehn). Pressure against $\underline{6/6}$ in an uprighting direction.
   2. Consider resting headgear arch against $\underline{21/12}$ during the first stage of treatment (or with considerable protrusion or irregularity - band the maxillary incisors)
   3. Check mandibular arch for possible use of a lingual arch to hold space or tip incisors labially. (Lip habits particularly may require labial tipping).
   4. Consider necessity for early extraction in cases of crowding.

C. Permanent dentition. Treat females as soon as possible. (Note: Perhaps all female Cl. II cases can be started with maxillary headgear whether all permanent teeth have erupted or not).

   1. Preferable to wait until $\overline{7/7}$ have erupted or nearly erupted. (Males)
   2. Non-extraction:
      a. Possible to band maxilla only and use maxillary headgear (probably requires more than night-time wear only).
      b. Full banding. May require maxillary headgear to aid in correcting Cl. II; the headgear may be used to reinforce maxillary anchorage and Cl. III elastics used to set up mandibular anchorage or; the headgear may be used against the mandibular arch to set up or reinforce mandibular arch for use of Cl. II elastics.
   3. Extraction:
      a. Maxillary second permanent molars only - band or do not band mandibular arch.
      b. Maxillary first bicuspids only - band or do not band mandibular arch.
      c. Maxillary and mandibular first bicuspids - adjust arches to carry mandibular buccal segments mesially.
      d. Maxillary first bicuspids and mandibular second bicuspids - reduces anchorage in mandibular posterior buccal segments. (note - use in cases where mandibular arch is only slightly crowded or mandibular anterior teeth are protrusive but well aligned.
      e. Other extraction combinations (occasionally mandibular and maxillary first permanent molars are a wise selection).

III. Class III.

A. Deciduous dentition.

1. No treatment.
2. Consider (?) treatment for anterior crossbites. (Not me)

B. Mixed dentition.

1. Treatment only for anterior crossbites. Do not attempt to treat true Cl. III.
   a. Biteplane cemented on incisal of mandibular incisor.
   b. Band maxillary anterior teeth and first permanent molars. (note - if patient cannot contact mandibular and maxillary anterior teeth because of the amount of underjet, then the case is probably a true Cl. III.)

C. Permanent dentition - Surgery + Orthodontic Treatment - Consider extraction of a mandibular incisor or incisors if considered treatable with bands alone.

IV. Deep overbite cases - dependent upon Class of occlusion.

A. Deciduous dentition - never for deep overbite only.

B. Mixed dentition - never for deep overbite only - correct underlying causes.

C. Permanent dentition (?) - check tooth size discrepancies.

V. Open bites - Life Saver Technique - Mouth Screen - Masking Tape.

A. Deciduous dentition. Attempt to detect cause and eliminate (i.e., tongue, thumb, etc.)

B. Mixed dentition. Same as above. Possibly mechanical interference is wise here in case of habits.

C. Permanent dentition (?) Unfavorable prognosis.
1. Rubber positioner in retention.

VI. Cl. II, division 2.

A. Deciduous dentition - no treatment.

B. Mixed dentition - correct molar relation with headgear or biteplate?
1. Consider necessity for alignment of maxillary anterior teeth. Band 621/126.

C. Permanent dentition - consider as Cl. II, division 1.

VII. Subdivision cases.

A. Right side Cl. I - left side Cl. II. Combine extraction of $\frac{4}{47}$ and $\frac{4}{75}$ or other such combinations.

VIII. Special cases.

A. Cleft palate - treatment according to occlusion. Attempt limited treatment if fibrous scar tissue is excessive.

B. Multiple absence of teeth. Leave spaces for bridge replacements rather than attempting closure of spaces in some cases. Close space wherever esthetically possible.

C. Consider extraction of $\frac{6/6}{6/6}$ more often when poorly restored or carious.

D. Consider extraction of $\frac{5/5}{5/5}$ in Cl. I cases with good facial esthetics and little crowding.

E. Consider extraction $\overline{2}/$ where /$\overline{2}$ is missing or previously removed combined with $\underline{4/4}$ or $\underline{5/5}$.