

Group IV: Based on post-menopausal span it was subdivided into:

Subgroup		No. of subjects
A-	0-10 years	68
B-	11-20 years	46

Group V: Based on loss of tooth it was subdivided into:

Subgroup		No. of subjects
A-	Complete dentition	52
B-	Partial dentition	58
-	Edentulous upper/lower	2/2

Table I: Group IIA had 38.09% subjects of group IA and 61.91% subjects of Group IB. Group IIB has 17.91% subjects of Group IA and 82.09% subjects of Group IB. Group II had 10% subjects of group IA and 90% subjects of Group IB. Low bone density seemed to be associated with postmenopausal subjects.

Table II: 79.49% subjects had complete dentition and 20.51% subjects had partial dentition/were edentulous in group IA. In Group IB, 47.93% subjects had complete dentition and 52.07% subjects had partial dentition/were edentulous.

Table III: 51.47% subjects in group VA, 45.50% subjects in Group VB, 2.94% subjects in group VC in group IVA, 37.00% subjects in group VB, 4.03% subjects in group VC in group IVB. Table showed decrease in percentage of partial dentition subjects as post-menopausal span increased.

## DISCUSSION

The present study was undertaken to reveal the possible influence of post-menopausal estrogen depletion on tooth loss as the same may signal the onset of osteoporosis in postmenopausal women.

The study excluded patients with poor oral hygiene and teeth affected with local factors so as to minimize the impact on tooth loss and the subjects having diseases affecting the physiology of bone formation and resorption too were excluded to streamline the association between estrogen depletion and tooth loss.

In the study, Calcaneus was the site measured by UBIS applying BUA which is a relatively new technique but with results that nearly match that of DEXA<sup>5</sup> - the current best method for assessing bone density. Calcaneus enables early detection of osteoporosis. UBIS does not involve any rays and the procedure is less consuming.

Subjects in post-menopausal phase were categorised to be deficient in estrogen as there has

been good clinical evidence of reduced estrogen production after menopause<sup>7</sup>.

## TABLE I

The present study showed lower bone density in post-menopausal females (Estrogen deficient Group) (Table I) also reported by other studies<sup>8,9</sup> as estrogen depletion leads to decreased cytokines production causing imbalance in bone remodelling<sup>10,11</sup>. The role of hormone replacement therapy in arresting the progress of osteoporosis had been reported<sup>12,13,14,15</sup> which substantiated the finding that estrogen depletion lowers the bone density.

## TABLE II

The study (Table-II) further revealed that the post-menopausal females are prone to greater tooth loss when compared to premenopausal females as supported by another study (Baylink)<sup>6</sup>. This may be explained on the basis that the roots of the teeth are embedded within alveolar bone essentially composed of cancellous bone which in estrogen deficiency is subjected to increased penetrative bone resorption leading to thinning of predominantly horizontal bony trabeculae perforation and subsequently microfractures, thus, reducing the connectivity of bone architecture<sup>16,17,18</sup>. This supports the assumption that the weakened alveolar bone structure due to estrogen deficiency is a primary and major factor for increased postmenopausal tooth loss.

## TABLE III

Another interesting finding in the study (Table-III) showed greater tooth loss in subjects with longer post-menopausal span (11-20 years) as 5-10 years after the menopause, the residual estrogen i.e. estrone level tapers down making the postmenopausal females increasingly estrogen deficient leading to more teeth loss<sup>19</sup>.

In the study, middle aged and elderly subjects with lower bone density revealed greater number of lost teeth giving weightage to the assumption in the study that postmenopausal estrogen deficiency caused lowered bone density thereby increased tooth loss.

Radiographs were not relied upon in the present study as 30-50% of the bone mineral must be lost before conventional radiography can reveal any change.

The results of the study should be interpreted keeping this in mind that it is a cross-sectional study with on epidemiologic evidence to date in India and is mainly based on information provided by the patient. So if a larger data bank can be provided to



conclusively establish that estrogen depletion increases the risk of tooth loss, then short term HRT can be provided to postmenopausal females which will be of great service to mankind in preventing tooth loss and subsequent residual ridge resorption.

## CONCLUSION

1. Statistically significant correlation between postmenopausal females with estrogen depletion and lower bone density.
2. Statistically significant correlation between postmenopausal females with greater number of lost teeth.
3. Directly proportional correlation between postmenopausal span and number of teeth lost.

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**TABLE I: SHOWING THE RELATIONSHIP BETWEEN HORMONAL STATUS (GROUP I) AND BONE DENSITY (GROUP II)**

DENSITY (GROUP II)							
Hormonal Status	Bone Density						Total No. of Subjects (n)
	(A) Normal		(B) Osteopenic		(C) Osteoporotic		
	x	%	x	%	x	%	
A. Premenopausal	24	38.09	12	17.91	3	10.00	
B. Postmenopausal	39	61.91	55	82.09	27	90	121
	63		67		30		160

$\chi^2=11.316$ ,  $p<0.001$ ; x=no. of subjects



**TABLE II: SHOWING RELATIONSHIP BETWEEN HORMONAL STATUS (GROUP I) AND STATE OF EDENTULOUSNESS (GROUP V)**

State of Edentulousness	Hormonal Status				No. of Subjects (n)
	Premenopausal (A)		Postmenopausal (B)		
	x	%	x	%	
(A) Complete Dentition	31	79.49	58	47.93	89
(B) Partial Dentition/ Edentulous	8	20.51	63	52.07	71
	39		121		160

$X^2=11.896, p<0.001$ ; x=no. of subjects

**TABLE III: SHOWING RELATIONSHIP BETWEEN POST-MENOPAUSAL SPAN (GROUP IV) AND STATE OF EDENTULOUSNESS (GROUP V)**

State of Edentulousness	Postmenopausal Span				No. of Subjects (n)
	(A) 0-10 Years		(B) 11-20 Years		
	x	%	x	%	
(A) Complete Dentition	35	51.47	17	37.00	52
(B) Partial Dentition	31	45.59	27	58.70	58
(C) Upper/lower edentulous jaw	2	2.94	2	4.30	4
	68		46		114

$X^2=2.348, p<0.3091$ ; x=no. of subjects

## Abstract

### PREDICTABLE IMPLANT PLACEMENT WITH A DIAGNOSTIC / SURGICAL TEMPLATE AND ADVANCED RADIOGRAPHIC IMAGING

*The technique described facilitates precise dental implant placement. A barium coated template with external guide wires used in conjunction with a computed tomography scan and interactive software may provide superior presurgical diagnostics, treatment planning and prosthetically directed implant placement measurements predetermined on the computed tomography scan can be transferred accurately to the diagnostic / surgical template by use of a precision milled cylinder placed into the template at the proper angulation and linear dimensions. The diagnostic / surgical template shows the surgeon the optimal position for implant placement, thus establishing greater clinical confidence when placing implants.*

- Kevin C. Kopp, Alyson B. Koslow  
Prosthet Dent 2003 JRG;611-5



# Construction of Soft Palate Obturator with Single Step Rubber base Final Impression

RAGHVI DOSHI \*, DIPTI S. SHAH \*\*, RUPAL MAHADEVIA \*\*\*

## ABSTRACT

No cancer is minor to the affected individual which cause either disfigurement, disfunction or both

This case report includes rehabilitating the patients having acquired soft palate defect where final impression taken by rubber base material in single step.

There are many techniques and materials available like compound, waxes and different elastic materials to record the movement of velopharyngeal mechanism. With the help of rubber base impression material, it is more accurate and easier to record both the hard and soft palate simultaneously.

Soft palate obturator prepared by this method has fulfilled both the objectives of obturation.

- To control the nasal emission during speech and
- To prevent regurgitation

## INTRODUCTION

Resection of hard and soft palate and selected structures results in a variety of anatomic and functional defects. These defects are tremendously inconvenient to the patient because of the loss of oronasal separation which substantially interferes with the important function of speech and swallowing.

These case reports explain the impression procedure for dentulous and edentulous subjects with acquired soft palate defect (Fig. 1 & 2).



Fig. 1 : Intraoral photograph of the patient with complete soft palate removal.

Key Words : Soft palate, Hard palate, Velopharynx, Rubberbase impression.

This article was presented at the 31st IPS and WCP conference held at New Delhi.

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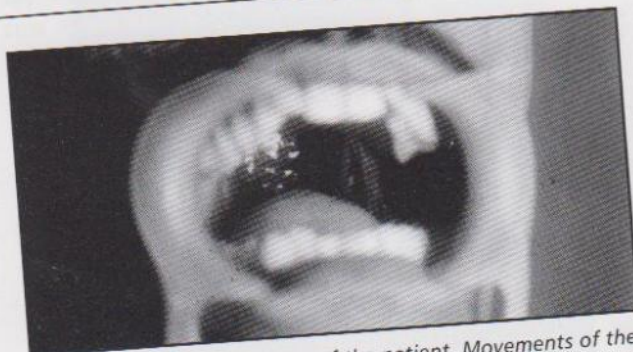


Fig. 2 : Intraoral photograph of the patient. Movements of the velopharyngeal muscles when patient says 'ah'.

## CASE REPORT 1

### HISTORY

A 25 year old, male patient with the history of carcinoma of soft palate came to Dental O.P.D. of G.D.C.H., Ahmedabad with the chief complain of regurgitation on swallowing and nasal twang during speech.

Patient had history of squamous cell carcinoma of the soft palate and was resected for the lesion before nine months.

### CLINICAL EXAMINATION

Resected site was completely healed. Hard palate and surrounding structures were normal. Patient had typical hyponasal voice quality during normal conversation. Nasal emission could be demonstrated by placing a mouth mirror beneath the nostrils. Regurgitation during swallowing was also present.

### PROCEDURE FOR CONSTRUCTION OF OBTURATOR

1. A preliminary impression was taken with impression compound in stock metal tray which was extended posteriorly at the level of palatal plane with acrylic resin to support the material.
2. 2-3 mm of wax spacer was placed on preliminary cast to provide space for impression material. A custom impression tray was constructed with autopolymerising acrylic resin. After finishing, polishing and perforations were made in the custom tray, it was checked in patient's mouth for proper extensions.
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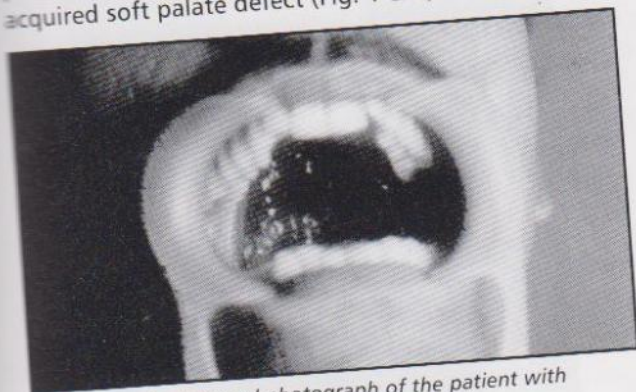


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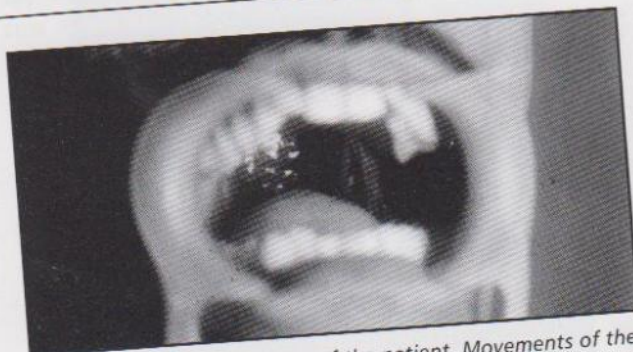


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3. The rubber base impression material was mixed according to the manufacturers instructions and



loaded on the custom tray in same thickness all over the tray. The posterior most border was properly covered with the material.

4. The patient was asked to do the circular head movements from side to side, taking as far backward and forward as possible. Then he was asked to say 'ah' and swallow. These movements activated remaining velopharyngeal musculature and molded the material. All the head movements should be done properly before material starts to set. Always keep one finger on the center of the palate which should not move during whole procedure as it will stabilize the tray, which is very critical in this technique (Fig. 3).

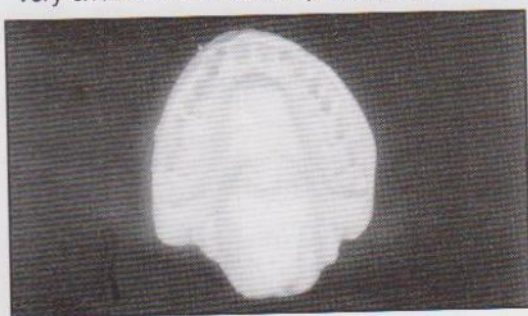


Fig. 3 : Single step rubber base impression with hard and the soft palate altogether.

5. The impression was removed, washed properly under tap water and inspected for reproduction of all the details specially at soft palate area. Check for the tissue contact on the impression surface. Movements of the muscles surrounding soft palate area should mold the impression properly (Fig. 4, 5, 6, 7 & 8).



Fig. 4 : Heat cured soft palate obturator.

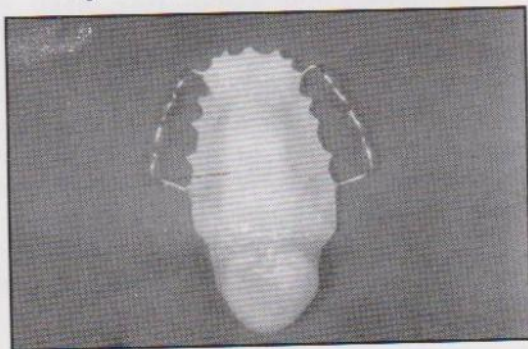


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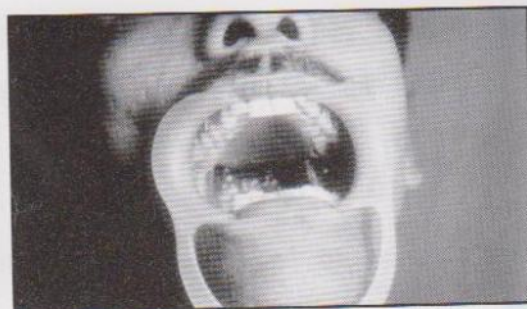


Fig. 6 : Prosthesis in patients' mouth.



Fig. 7 : Movements of the muscles surrounding the prosthesis.



Fig. 8 : X-ray, lateral view showing extent of the prosthesis in soft palate area and its relation to atlas vertebrae.

## CASE REPORT 2 (Fig. 9 & 10)

### HISTORY AND CLINICAL EXAMINATION

This edentulous patient was 55 years old with the history of squamous cell carcinoma at posterior border of the soft palate.

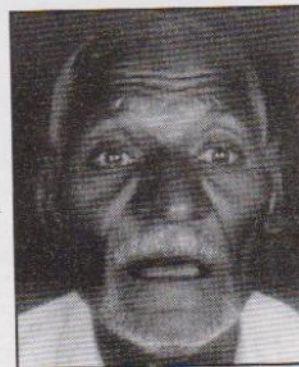


Fig. 9 : Extraoral photograph of complete edentulous patient with soft palate defect.



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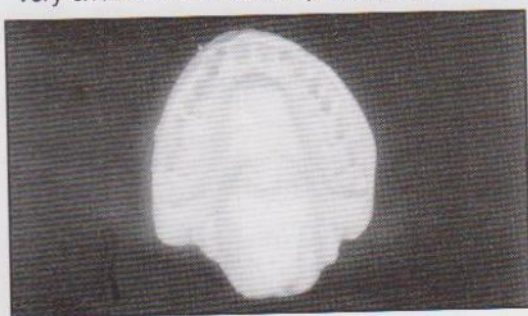


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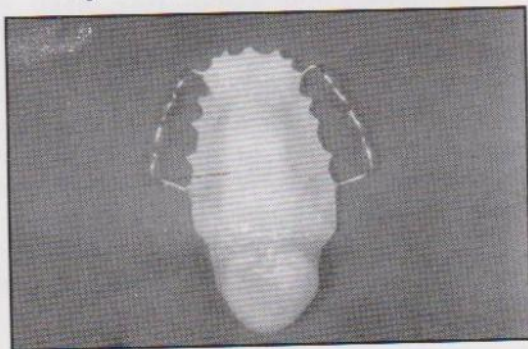


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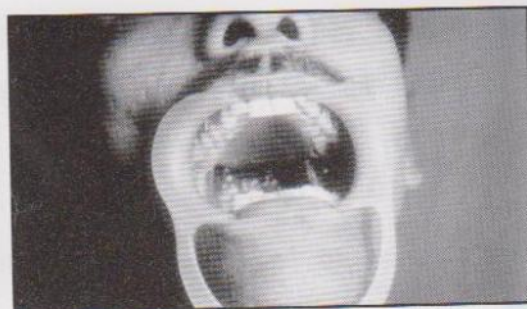


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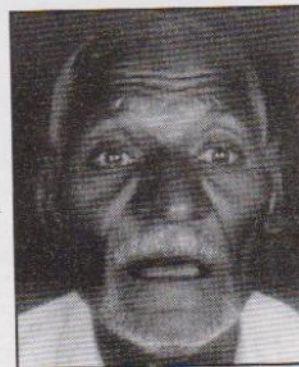


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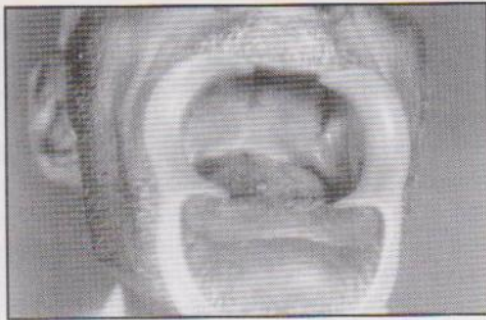


Fig. 10 : Intraoral photograph showing one third part of soft palate resected.

Posterior 1/3rd part of soft palate was resected before one year. His present complain was regurgitation during swallowing and nasal twang during normal conversation.

#### PROCEDURE FOR CONSTRUCTION OF OBTURATOR

Same impression procedure was followed in this patient also. As patient was edentulous, preliminary impression was taken with impression compound as normal edentulous patient.

Tray was extended posteriorly to record posterior most area of soft palate. Custom tray was made as described earlier and extensions were checked.

Elastomeric impressin material was mixed according to manufacturer's instructins and loaded properly on the tray. Muscle molding at soft palate region and labial and buccal vestibule should be carried out. (Fig. 11, 12, 13, 14 & 15).



Fig. 11 : Single step rubberbase impression with hard and soft palate altogether.

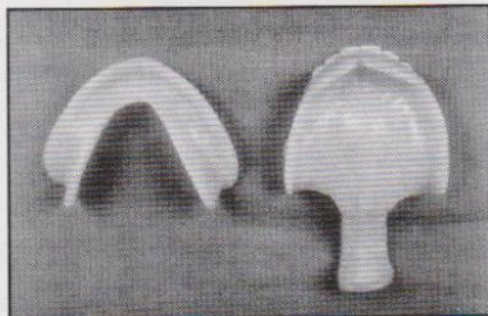


Fig. 12 : Upper and lower complete dentures with pharyngeal extension.



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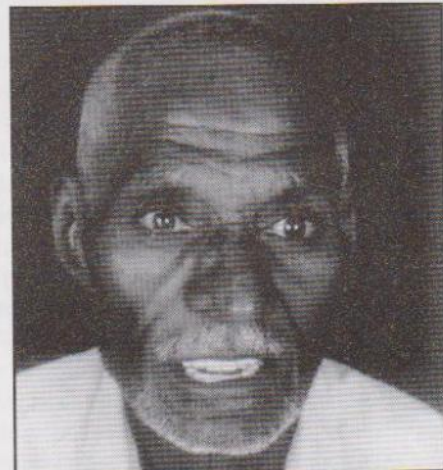


Fig. 14 : Extraoral photograph of the patient.



Fig. 15 : X-ray lateral view showing extension of the obturator and its relation to atlas vertebrae.

#### ADVANTAGES

1. This impression procedure saves chairside time of clinician and is more convenient to the patient as repeated insertion and removal of impression tray and head movements are avoided.
2. Obturator can be heat cured in one piece as hard and soft palate are recorded in the same impression altogether.

#### DISADVANTAGES

1. Precision and care is required while loading and inserting the tray in the patient's mouth. If it is not properly loaded there are chances of underextension.



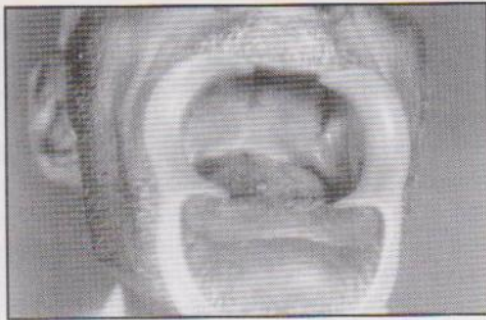


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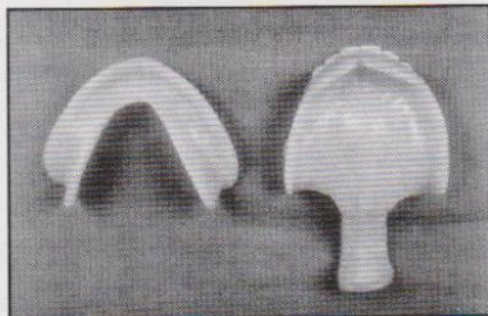


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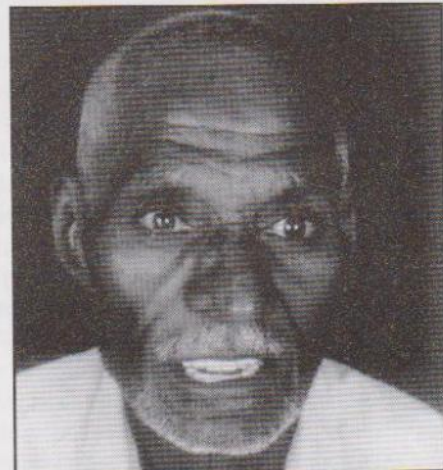


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2. More expensive as rubber base material is used. Many methods have been advocated to record the movement of velopharyngeal muscles.

## DISCUSSION

According to Chalian the structures surrounding the nasopharynx move during speech, the dynamics and details of these structures must determine the shape and the configuration of pharyngeal bulb. He has used compound which was lined with thermoplastic wax for refined muscle trimming.

Taylor has suggested using low fusing compound over high fusing compound and final refinement with mouth temperature softening wax.

Beumer has also suggested the same technique, where gutta purcha can also be used in place of compound. According to him obturator prosthesis left in mouth after layering thermoplastic wax over modeling plastic for about 5 minutes, during which time previously described head movements were repeated several times.

In all the above mentioned technique several insertion and removal are needed. With each insertion head movements have to be repeated, which is sometimes inconvenient to the patient. Patient may not co-operate fully with each insertion and head movements, specifically when it is pediatric patient with soft palate defect.

Technique which we have mentioned here has an advantage that it needs to insert the tray only once in the patient's mouth and it records both hard and soft palate part of obturator altogether.

## SUMMARY AND CONCLUSION

The objective behind every impression, regardless of the material used is to record perfect movements of muscles, so that the final prosthesis will allow complete velopharyngeal closer during speech and yet have space for air flow during breathing.

This impression procedure gave satisfactory results in both of these cases. There was no regurgitation on swallowing after insertion of the obturator and nasal twang improved the period of time.

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## Abstract

### OCCCLUSION : REFLECTIONS ON SCIENCE AND CLINICAL REALITY

*The last 50 years have seen progress in emphasizing scientific evidence as a basis for dental practice including occlusal therapy. Although a proper understanding of the contributory role of occlusion to temporomandibular disorders should not be minimized, the importance of occlusion in other areas of dental education and practice should not be overlooked.*

*The primary objective of this article is to discuss the nature of this problem as it relates to the duality of science and clinical reality in the evidence based paradigm, information transfer quality of evidence, clinical trials, and clinical aspects of occlusion some suggested solutions for this problem and thoughts on past and future perspectives of occlusion are expressed in context of inquiry.*

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## SUMMARY AND CONCLUSION

The objective behind every impression, regardless of the material used is to record perfect movements of muscles, so that the final prosthesis will allow complete velopharyngeal closer during speech and yet have space for air flow during breathing.

This impression procedure gave satisfactory results in both of these cases. There was no regurgitation on swallowing after insertion of the obturator and nasal twang improved the period of time.

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## Abstract

### OCCCLUSION : REFLECTIONS ON SCIENCE AND CLINICAL REALITY

*The last 50 years have seen progress in emphasizing scientific evidence as a basis for dental practice including occlusal therapy. Although a proper understanding of the contributory role of occlusion to temporomandibular disorders should not be minimized, the importance of occlusion in other areas of dental education and practice should not be overlooked.*

*The primary objective of this article is to discuss the nature of this problem as it relates to the duality of science and clinical reality in the evidence based paradigm, information transfer quality of evidence, clinical trials, and clinical aspects of occlusion some suggested solutions for this problem and thoughts on past and future perspectives of occlusion are expressed in context of inquiry.*

- Major M. Ash (School of Dentistry, University of Michigan)  
J Prosthet Dent 2003; 90; 373-84



# Use of Anterior attachment of Lingual Frenum as a pre-extraction record in determining the original vertical position of Mandibular Anterior Teeth

MEDHA DILIP JOSHI \*, S. P. DANGE \*\*

## ABSTRACT

*Pre-extraction records can play an invaluable role in determining vertical relation in edentulous patients. In maxilla, incisive papilla is a stable anatomic landmark and is used as a guide to determine vertical position of maxillary anterior teeth and vertical relation. The mandible lacks such a stable anatomic landmark.*

*The purpose of this study was to evaluate the accuracy of measurement of distance between anterior attachment of lingual frenum (AALF) and incisal edges of mandibular incisors on casts when frenum was recorded in function. This distance can be used as a pre-extraction record for determining original vertical position of mandibular anterior teeth in complete denture patients.*

## INTRODUCTION

**T**he only correct position of a tooth is the one in which it was placed by nature" - Carl O. Boucher. Even though the best position might not be acceptable, clinically in all cases it would be valuable as a starting point in establishing anterior tooth position for every complete denture patient. Pre-extraction records provide valuable guide for placement of anterior teeth. They include diagnostic casts, photographs, profile templates and mouldages.

When the distance between the incisive papilla and the incisal edges of the maxillary central incisors is measured on a pre-extraction cast, the vertical position of maxillary centrals can be copied in edentulous patients. There is no stable landmark in mandible.

The purpose of this study is to evaluate the reliability of the measurement of the distance between the anterior attachment of lingual frenum and the incisal edges of the mandibular incisors, on casts, to be used as a pre-extraction record for determining the vertical position of mandibular incisors in complete denture patients.

**Key Words :** Anterior attachment of lingual frenum (AALF), Incisal edge of mandibular central incisors, Pre-extraction records.

*This article was presented at the WCP and 31st IPs Congress 2003, held at New Delhi.*

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## MATERIAL AND METHODS

20 dentate subjects (10 men, 10 women) between the ages of 21 and 38 years (mean age 26 yrs) were selected. All had natural maxillary and mandibular teeth. One subject had mandibular right first molar missing. Teeth were immobile.

Subjects with fractured or abraded incisal edges of the mandibular incisors and ankyloglossia were excluded from the study. Two mandibular casts were made for each patient. Casts were made from irreversible hydrocolloid impressin material, in perforated plastic stock trays. Trays were adjusted so the lingual edges of the trays were approximately 2 to 3 mm short of the movable tissues of the floor of the mouth. All subjects were instructed to elevate the tongue and moisten the upper lip with tip of the tongue, while impressions were made. All impression were poured in dental stone. The vertical distance between the anterior attachment of lingual frenum (AALF) and the incisal edges of the mandibular incisors was measured on casts of each subject.

Two pencil marks were placed on mandibular casts (Fig. 1).



Fig. 1

1. A lower mark placed - at the frena, at the mid-line and in the sub-lingual sulcus.
2. Upper mark, placed-on the incisal edge of right or left mandibular central incisor.

These pencil marks were placed at the same position on both the casts. Casts were mounted on the cast holder of a Jelenko surveyor with occlusal plane in horizontal position. Tilt of the casts was adjusted



until teeth contacted the glass slab in at least three widely divergent points. Surveying arm of the surveyor was lowered until the tip of the analyzing rod contacted the lower pencil mark. (Fig. 2)

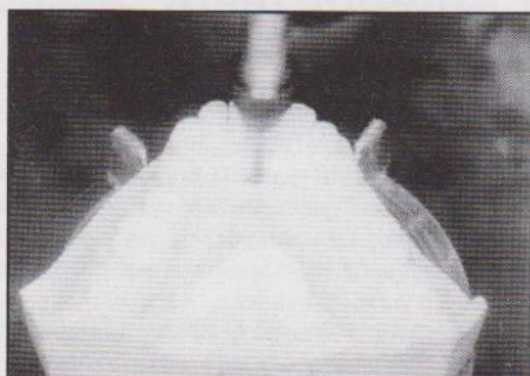


Fig. 2

A horizontal mark was made with a 0.5 mm pilot pen, where the surveying arm met the horizontal arm. Second horizontal mark was placed on the surveying arm of the surveyor when tip of analyzing rod contracted the upper pencil mark (Fig 3). The distance between the two horizontal marks was measured using a vernier caliper (Fig 4). All measurements were made by one clinician. The mean and the standard deviation (SD) for all subjects were calculated and statistically analyzed.

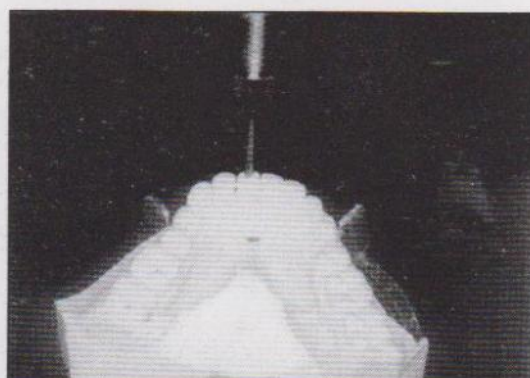


Fig. 3

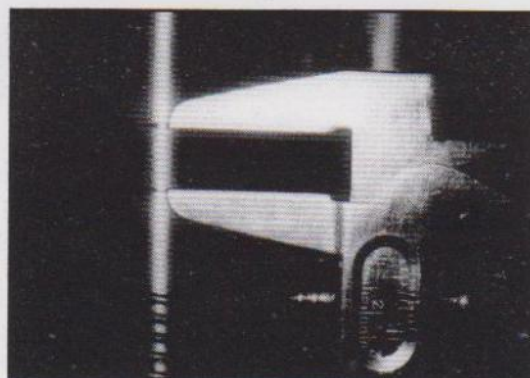


Fig. 4

## RESULTS

The measurements, means and standard deviations of all the subjects are presented in Table 1

- Mean distance between AALF and incisal edges of mandibular incisors: 11.995 mm
- Mean standard deviation : 1.6163 mm
- Coefficient of variation : 0.13%

Variation in measurements indicate anatomic individuality of the patients.

Results indicate that the distance between the AALF and the incisal edges of mandibular central incisors is reliable when the frenum is recorded during function. The results for subject 11 and 17 were highest as the attachment of lingual frenum was low. The result for subject 1 was low as the size of mandibular incisors was relatively small and the attachment of lingual frenum was high.

## DISCUSSION

As the position of incisal edges of mandibular central incisors is stable, the AALF position can be considered relatively stable when frenum was recorded in function. Anterior attachment of lingual frenum being a soft tissue attachment does not undergo change after extraction, hence is reliable when used as pre-extraction record Incisive papilla is the elevation of tissue located in the midline palatal to the maxillary central incisors; it is stable and can be used for determining the vertical dimension of occlusion (VDO) of edentulous patients. So when measurements are made on pre-extraction diagnostic casts from incisive papilla to incisal edges of maxillary central incisors & AALF to incisal edges of mandibular central incisor then the vertical height of maxillary and mandibular wax occlusion rims are adjusted anteriorly to correspond with these measurements. Hence the vertical position of maxillary and mandibular incisors can then be copied in complete dentures, thus the VDO of edentulous patients can be preserved.

## CONCLUSION

Within the limits of this study, we can conclude that

- Distance measurement between AALF and the incisal edges of mandibular incisors is reliable when the frenum is recorded during function.
- Distance between AALF and the incisal edges of mandibular central incisors can be used on pre-extraction diagnostic casts as pre-extraction record for determining the original vertical position of mandibular anterior teeth.

## SUMMARY

Determination of VDO and proper positioning of anterior teeth are major factors in making complete



dentures which will give optimum service. Wider use of pre-extraction records would be a great assist in accurately determining these factors. This method is simple, does not necessitate taking extra steps, thus encourages both dentist and patient when making pre-extraction diagnostic casts.

**TABLE 1**

Subject No.	Cast 1	Cast 2	Mean	SD
1	9.8	9	9.4	0.56
2	13	12.5	12.75	0.354
3	12	12	12	0.00
4	12	13	12.5	0.71
5	9	12	10.5	2.12
6	11	10	10.5	0.71
7	12	12	12	0.00
8	14	14	14	0.00
9	12	11	11.5	0.71
10	10.5	12	11.25	1.061
11	16	14	15	1.41
12	10	10	10	0.00
13	14	14	14	0.00
14	11	11	11	0.00
15	13	14	13.5	0.71
16	11	11	11	0.00
17	14	16	15	1.41
18	13	11	12	1.41
19	11	12	11.5	0.71
20	10	11	10.5	0.71

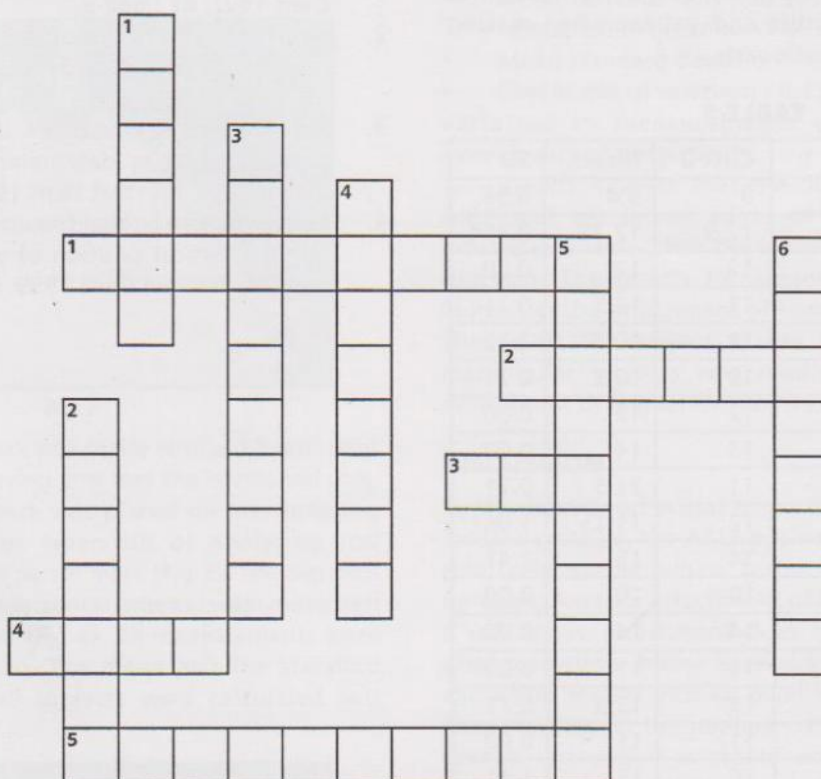
All measurements in millimeters.

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## PROSTHODONTIC WORD POWER - 8



### ACROSS

- 1) The capacity to absorb mechanical energy without plastic deformation.
- 2) It reduces resistance to tarnish and corrosion.
- 3) Plastic and creep flow of a dental alloy under its own weight.
- 4) It is added primarily as an oxygen scavenger.
- 5) It is an effective solid solution hardener.

### DOWN

- 1) Has Carcinogenic potential and is a potent sensitizing agent
- 2) It is added principally to compensate for the decreased thermal expansion coefficient that results from making the metal ceramic alloys silver free.
- 3) It is the resistance to elastic deformation.
- 4) It describes gold alloys by the number of parts per thousand of gold.
- 5) It is a measure of ductility or the degree of plastic deformation an alloy can undergo prior to fracture.
- 6) It is essential to provide passivation and corrosion resistance.

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## Clinical Tip

### Determination of proper vertical height of the wax occlusal rims

Dept. of Prosthodontics, Nair Hospital Dental College.

**D**etermination of proper vertical height of the wax occlusal rims in the laboratory.

Proper height of wax occlusal rims can be decided with the help of the marks made on the handle of the custom tray. The final impressions are made and marks are made on the handle of the custom tray at the level 1-2 mm below the upper lower edge of the upper lip for maxillary and at the level of upper edge of lower lip. These marks assist the dental technician in determining the proper vertical height of the occlusion rims in the anterior region.

#### PROCEDURE

- 1) Make the Maxillary and mandibular preliminary impressions in the usual manner and pour both impressions in artificial stone.
- 2) Make maxillary and mandibular acrylic resin special custom trays. Place the handle of the maxillary custom tray so that its labial surface is 8-10 mm in front of incisive papilla, then place the handle of the mandibular custom tray on the ridge. This position provides support to the lips.
- 3) Try the custom tray in the patient's mouth and adjust the border.
- 4) Make the final impressions and mark the labial surface of the special tray handles with the pencil while the trays are in the patient's mouth place the mark on the handle of maxillary tray parallel and 1-2 mm below the lower edge of the upper lip. Place the mark on the handle of the mandibular tray parallel and even with the upper edge of the lower lip.
- 5) Remove the impressions from the patient's mouth, cut grooves on the pencil marks with a sharp knife and pour the impressions.
- 6) Measure the distance from the lower border of the base of each master cast to the mark and record the measurement.
- 7) Remove the trays and impression material from the cast and make the record bases and construct the wax occlusal rims.
- 8) Adjust the vertical height of the maxillary and mandibular occlusal rims anteriorly to the height measured in step 6.
- 9) Adjust the posterior height of the mandibular occlusal rims to the junction between the middle and the upper third of the retromolar pad and the posterior height of the maxillary wax occlusal rim to approximately 5-7 mm in length.





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## Upcoming Events

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February 19-20, 2004  
American Prosthodontic Society  
Chicago, Illinois  
*Information*  
APS  
Fax : + 1 312 944 - 5747

February 20-21, 2004  
American Academy of Fixed Prosthodontics  
Chicago, Illinois  
*Information*  
Dr. Robert Staffanou  
Secretary,  
AAFP  
Fax : + 1 707 875-2927  
[www.prosthodontics.org/form/aafp](http://www.prosthodontics.org/form/aafp)

February 21-22, 2004  
American Academy of Restorative Dentistry  
Chicago, Illinois  
*Information*  
Dr. Thad Langford  
Fax : + 1 406 586-0397

March 18-20, 2004  
Academy of Osseointegration  
San Francisco, California  
*Information*  
[www.osseo.org](http://www.osseo.org)

April 27-May 2, 2004  
American Academy of Cosmetic Dentistry  
Vancouver, Canada  
*Information*  
[www.aacd.com](http://www.aacd.com)

April 30 - May 2 2004  
International Quintessence Symposium  
Sydney Australia  
*Information*  
E-mail : [abirkin@halos.com.au](mailto:abirkin@halos.com.au)

May 4-9 2004  
Academy of Prosthodontics  
Nigra Falls, Ontario  
*Information*  
[www.academyprosthodontics.org](http://www.academyprosthodontics.org)

May 27-29, 2004  
European Academy of Esthetic Dentistry  
World Meeting  
Venice Italy  
*Information*  
[www.guintessenz.de](http://www.guintessenz.de)

June 17-19, 2004  
International Congress on Maxillofacial  
Rehabilitation  
Maastricht, the Netherlands  
*Information*  
[www.res-inc.com/ismr.htm](http://www.res-inc.com/ismr.htm)