DISCUSSION

Hardness is an important property of material. Many methods of hardness measurements have been used but most realistic approach to assessment to hardness of material is by measurement of it's resistance to indentation.

Shen and others (1989)[12] shown that some disinfecting agents cause changes in properties of denture base resins. Asad and others (1993)[13] concluded in their study that dimension in chlorhexidine and Glutaraldehyde for 7 days produced significant reduction in surface hardness of travelon denture base method. The changes could be due to slow absorption or disinfecting chemicals into the resin that resulted in some structural changes in the polymer. The other reasons for changes may be surface finish and temperature of the testing environment.

In this study the hardness values obtained for control group for trevalon and acrylin specimens shows that no significant difference was found when the hardness of Travelon and Acrylin H specimens immersed in disinfectant solutions for 1 day and 7 days where compared with the control group.

CONCLUSION

This study evaluated the effect of immersion of 2 brands of poly (methylmethacrylate) blocks in one of the 3 types of disinfecting solutions. Under the condition of the study, the following conclusions may be made.

No significant effect on surface hardness of the specimens was found after immersion in any of the solutions for 1 day and for 7 days.

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GOLD MEDAL

Gold Medal was awarded to Prof. Dr. Firoze Mirza and a Hon. DIPLOMA by the President of Romania Dental Society at the 17th IRCOI (International Research Committee of Oral Implantology) Congress held at Bucharest Romania on 14th June 2002. Dr. Mirza has been the President for India of IRCOI Research Committee for the last 17 years since its inception.

A Technique for Fabrication of Two-Piece Silicone Obturator for a patient with Severe Trismus

MONIKA MAKKAR, M.D.S.*, MRS. DIPTI S. SHAH, M.D.S.**, MRS. DARSHNA SHAH, M.D.S.***

ABSTRACT

One of the most rapidly growing areas of dentistry from the stand point of both interest and need is Maxillofacial Prosthetics. With the advent of new materials and techniques, vast improvement in rehabilitation of Maxillofacial patients have been realized.

The objective of the study was to optimally restore the compromised functions of mastication, speech and esthetics for a Maxillectomy patient with severe trismus.

A two piece maxillary prosthesis was introduced as the patient had restricted mouth opening of 1.8 cm, post surgically.

This report lays stress on the sectional impression technique as well as separate processing of palatal plate and silicone obturator portion which helped the patient in easy insertion and removal as well as successfully restoring other functions of stomatognathic system.

INTRODUCTION

It is the God-given right of every human being to appear human.

Few areas of dentistry offer more challenges to the technical skills and ingenuity, or greater satisfaction than the successful rehabilitation of function and esthetics in a patient with gross anatomic defect and deformities of the head and neck region. One of the most rapidly growing areas of dentistry from the standpoint of both interest and need is Maxillofacial Prosthetics.

During the past three decades, dentists have added to their knowledge and skill in this challenging field. The refinement of techniques and the development of new materials have aided the dentist and the patient in realizing the vast improvement in esthetics and function of prosthetic appliances. In the past, Acrylic resin was the material of choice for the "Obturator" part of the prosthesis. Although the Silicones were introduced in 1946, their use in Maxillofacial Prosthetics was mostly limited to extra oral prosthesis. Silicones for intra-oral use were introduced in late 1960s.

The present case report describes the rationale and technique for the fabrication of two-piece maxillary prosthesis using Molloplast-B for a patient with severe trismus and restricted mouth opening, post surgically.

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CASE REPORT

A 50 years old male "Rejendra A. Patel" (Fig.-1) reported at G.D.C. & H., Ahmedabad with the surgically resection of left maxilla.

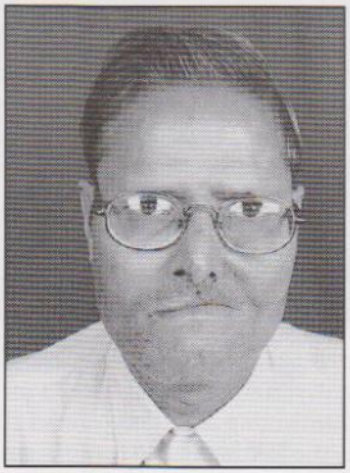

***Fig. 1 :** Patient without prosthesis*

Personal History : revealed the habit of tobacco chewing since last 15 years and family history of throat cancer in patient's mother.

Medical History : revealed carcinomatous growth in the posterior part of the hard palate with submucous fibrosis.

On oral Examination the following features were seen:

- A large defect in the region of left maxilla along with the loss of dentition on the same side. (Fig. 2)

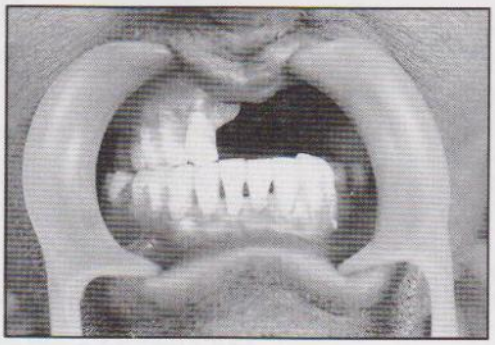

***Fig. 2 :** Intraoral view of occlusion*

with sections of putty reassembled

bands in buccal mucosa
mouth opening of 1.8 cm.

two piece maxillary prosthesis was
with obturator part in resilient silicone
all the desirable undercuts. Palatal plate was
in acrylic resin material with retentive key.

METHODS

impression with alginate and
compound was taken. The impression
part was taken after blocking the
undercuts. The impression was removed
sections and re-assembled outside the mouth
a cast was poured.
impression was made with the rubber
impression material. The defect portion was
with the help of putty (heavy body
silicone) (Fig. 3). Two sections of putty
inserted into the defect and great care was
with application of petroleum jelly to prevent
binding of sections of putty with each other
also with the light body material on the tray,
to help easy sectional removal from the mouth.
were reassembled outside the oral cavity and
master cast was made.

After flasking, smaller section of putty on the stone core

3. Maxillo-mandibular relation was recorded with a trial base which carried a retentive clasp engaging the rest of the dentition. Trial base also carried a retentive extension into the defect for fitting in to the obturator part mechanically.

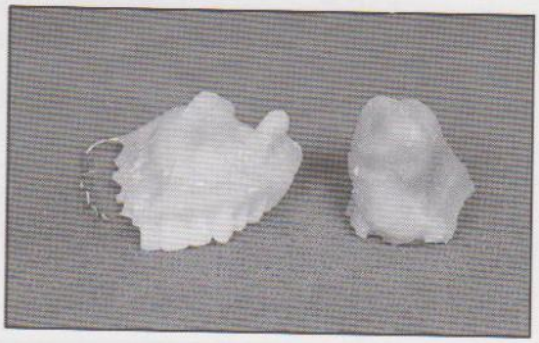

Fig. 5 : *Processed two part prosthesis – Acrylic resin palatal plate with retentive clasp and key (Left) Silicone obturator part (Right)*

4. Final trial was taken after verifying phonetics and esthetics.
5. Impression of the defect, was taken with putty in two sections separately with the retentive key and clasp of trial base engaging their respective positions in the mouth (Fig. 6 and 7). The cast of the defect part was made and flasked for final processing of obturator part separately.

Fig. 6 : *2 Parts reassembled outside the oral cavity*

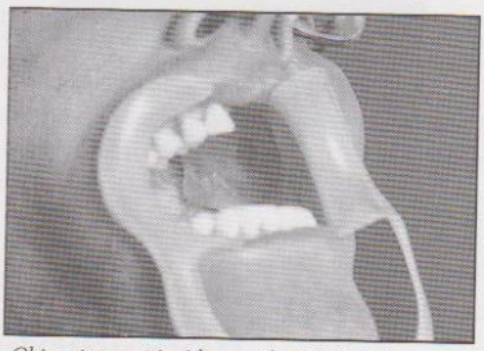

Fig . 7 : *Obturator part inside mouth with hole for retentive key*

6. Care was taken for not getting the stone core fractured during the procedure. The key part was poured with dental stone. Also the putty for the impression of the defect; was used in two well lubricated sections in such a way that the smaller section of putty could come out along with the stone core during opening of the flask (Fig. 8 and 9). This was then peeled off the core for final packing of Molloplast.
7. Processing was done after trial packing Molloplast B (Fig. 10). The borders were trimmed with sharp scalpel blade.
8. For final processing of palatal plate into acrylic resin, cast was resected into two halves with defect portion separate. Trial base was sealed on to the remaining cast and was processed separately.

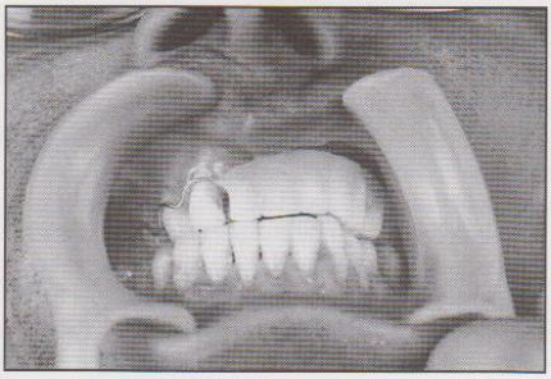

Fig. 8 : Full prosthesis in the mouth

Fig. 9 : Extraoral view with prosthesis in the mouth.

9. Patient was advised meticulous oral hygiene and was called for re-evaluation after every 3 to 6 months.

DISCUSSION

In Maxillofacial Prosthetics there exists a broad variety of methods and material types for gaining retention, stabilization and immobilization.

Anatomic undercut areas are a welcome feature in gaining retention in the post surgical cases. To engage the desirable undercut areas, Silicone soft relining material was used for this patient. Polydimethyl siloxane (Silicone soft reliner Molloplast – B) has excellent dimensional stability, well tolerated by sensitive intraoral and nasal tissues. It is non toxic, non-carcinogenic, resilient and can engage undercuts that can't be entered with hard acrylic resin.

Though silicone material has disadvantage of difficulty in polishing and is also prone to Candida infection, it is a material of choice in Maxillofacial Prosthetics because of its advantages.

SUMMARY and CONCLUSION

It is a great challenge to a prosthodontist to rehabilitate a patient with Maxillofacial defect having limited mouth opening.

A flexible two piece silicone obturator is an alternative treatment to one piece acrylic resin obturator for the patient with severe trismus.

Silicone can provide the necessary comfort and esthetics without compromising retention. With the use of silicone two-piece prosthesis, we could optimally restore the function of mastication, speech and esthetics for the reported case.

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Two Piece Palatal Prosthesis in Rehabilitation of Cleft Lip and Palate

M.S. Ravi, M.D.S.*

ABSTRACT

CLEFT LIP AND CLEFT PALATE

A congenital disorder, which can be seen, felt and heard constitutes to a crippling affliction. It has been said that man's need for artificial replacement of missing or lost body parts has existed as long as man himself. The case reveals the rehabilitation of cleft lip and cleft palate by giving a palatal plate and a lip prosthesis.

INTRODUCTION

The management of cleft lip and palate patients is a team approach where a dentist, surgeon, paediatrician, speech pathologist, therapist, psychologist, audiologist, medical social workers and occasional councellors play the respective roles. This article reveals a case report which describes the importance of psychological management, functional management such as preventing the oronasal fistula, improving speech, oral hygiene and aesthetics of the patient.

CASE REPORT

The patient named Thammem Ansari, a boy aged 10 years was referred from the Department of Plastic surgery to Department of Prosthodontics, Sri Ramachandra Dental College. The boy was born with a cleft lip and a cleft palate. The patient has undergone surgery twice. The first surgery was at the age of six months and the second surgery was done when the patient was four years old. Both the surgeries were not able to contour the cleft lip and cleft palate.

On examination, the patient had a wide cleft in the upper lip and the nose was deviated, his speech had a nasal tone. Intraorally, the patient was classified as Cleft Class four. The patient had an oronasal fistula and was not able to maintain oral hygiene due to regurgitation of food through nasal cavity. The patient had a retained deciduous left lower second molar which was mobile and dental caries in the permanent molars.

TREATMENT APPROACH

With the help of comprehensive examination, evaluation of diagnostic data, consultation with the patient and his parents a treatment plan was finalized. The treatment plan included.

a. Immediate or Emergency Treatment Phase
b. Intermediate Treatment Phase
c. Definitive or Final Treatment Phase

IMMEDIDATE OR EMERGENCY TREATMENT PHASE

This phase included the permanent filling of the decayed molar tooth oral prophylaxis and extraction of the mobile deciduous second mandibular molar tooth.

INTERMEDIATE TREATMENT PHASE

The highlight of this phase of treatment was to construct a palatal plate and a lip prosthesis. It was decided to fabricate the lip and palatal prosthesis separately as a two piece prosthesis because the path of insertion for the lip prosthesis was not favourable. The two prostheses were fused. First the palatal plate prosthesis was fabricated on a master cast made from an impression which was taken with the help of a heavy body and light body elastomeric impression material. The palatal plate was tried in the patient's mouth.

For the lip prosthesis impression compound was used to contour the missing part of the lip and sleeve joint was made to the palatal plate and this impression compound lip pattern was then duplicated in heat cured acrylic. The facial surface of the lip prosthesis was colour matched with the facial skin with the help of colouring pigments and cold cure acrylic. Finishing and polishing was done and the result was that the patient had a far better oral hygiene, improved speech and aesthetics. The patient had come out of the psychological trauma and was able to move around freely in the society with confidence.

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Fig. 1 :

Fig. 2 :

Fig. 3 :

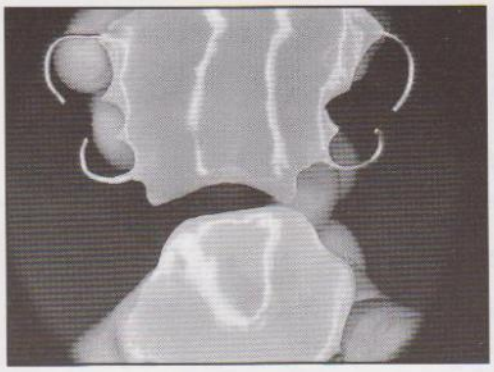

Fig. 4 :

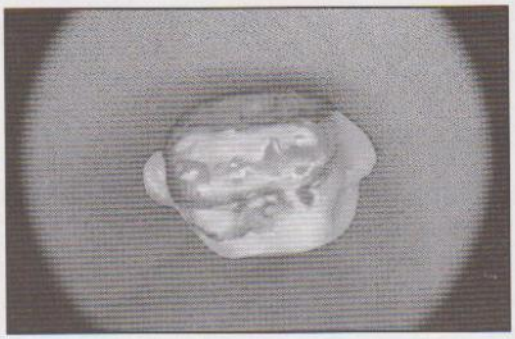

Fig. 5 :

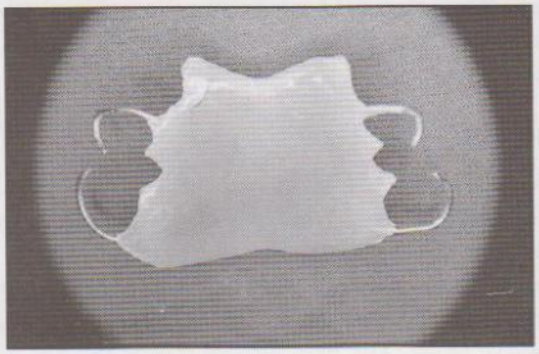

Fig. 6 :

Fig. 7 :

DEFINITIVE OR FINAL TREATMENT PHASE

The definitive or final treatment phase involved the first part which is the mandatory surgical phase where in, an intentional bilateral fracture was made to set back the premaxilla. The palatal interference of bone was trimmed to a smooth natural palatal contour, followed by vestibuloplasty to increase the sulcus depth. By this the normal lip fall was obtained and finally the bilateral cleft lip and cleft palate was repaired. After the completion of the surgical phase, a fixed speech prosthesis was given to improve the speech of the patient.

CONCLUSION

The aim of rehabilitation of cleft lip and cleft palate is to restore the missing oral and facial structures. It is a team approach rather than a one man show. Prosthodontist plays a very important role in improving the functional, psychological and aesthetic needs of the patient. During rehabilitation of patients who fall in younger age groups extra care must be taken to overcome their psychological trauma to face the society and to walk out with confidence and a new smile to face the world.

Photoelastic Evaluation and Comparison of Stress Transmission Characteristics of two Different Overdenture Retainer Designs

DESHRAJ JAIN M.D.S.*, ALOK DWIVEDI, M.D.S.**

Statement of problem : When two canine abutment teeth are used to support an overdenture prosthesis, optimal stress distribution to minimize forces to the abutments is desired.

Purpose : This study used photoelastic stress analysis to compare the stress patterns generated around canine abutments using two different overdenture retainer designs.

Material and methods : Two canine abutments were anchored in the photoelastic mandible and overdentures were fabricated using two different overdenture attachments. The dentures were lined with resilient layer of impression material to simulate oral mucosa. The attachments used were tissue bar and ball-socket type. Vertical load of 5 to 50 lb was applied by jaw simulator. Resultant stress fringes were photographed and evaluated quantitatively.

Results : Ball-socket type of attachment transmitted maximum amount of stress and tissue bar transmitted least amount of stresses.

Conclusion : As the retentivity of the attachment increased there was more stress concentration around the abutments.

INTRODUCTION

In prosthodontics, we regularly encounter patients who are partially edentulous as a result of caries, periodontal disease, etc. Our task is to restore the masticatory function and to preserve for as long as possible what remains in dentition and hard and soft supporting structures.

The stresses of mastication are very well dissipated by supporting structures. When the individual is dentulous but when the teeth are lost these stresses directly come on the residual alveolar ridge and they become deleterious to the residual ridge and cause resorption of ridge.

Dentists have long recognized this problem and have tried to develop treatment modalities like telescopic dentures, overdentures, resilient lining of dentures, etc. to reduce the stresses coming on the supporting bone.

A variety of methods for using natural teeth to support and stabilize complete dentures have been used such as natural teeth with metal copings, tissue bars and resilient and non-resilient stud attachments.

In all these methods the abutment teeth and residual ridge share the force of mastication in varying degrees and the degree of load sharing depends upon the specific attachment system used. However, the major premise of overdenture treatment is to transfer occlusal forces along the long axis of the supporting tooth, to minimize horizontal torque, to allow for a more favourable situation for periodontal ligaments.

Photoelastic stress analysis provides a method for visualizing and analyzing the forces exerted around abutments. It is based upon a unique property of some transparent materials like glass, mica, quartz, certain epoxy resins, etc. When a photoelastic model is stressed and a beam of polarized light enters the model, the light is divided into two components waves, each with its plane of vibration parallel to one of the principal planes of stress. The total stress pattern within the models are viewed, photographed and calculated quantitatively.

In the present study the stress patterns generated around the overdenture abutments under dynamic loading were evaluated and compared using bar and clip type and ball-socket type attachment systems, by photoelastic stress analysis.

MATERIAL AND METHODS

Mandibular arch models, with only two canines remaining, were made using photoelastic resin CY 212 and extracted mandibular canines. Light bodied silicon rubber was used to simulate periodontal ligament.

Canines were endodontically treated and cutoff at 1 mm above gingival level. For tissue bar the canines were prepared with round end diamond forming a definite chamfer finish line. Wax patterns for copings and Dolder bar were prepared and cast. Dolder bar were cemented on the prepared overdenture abutment. Ball and Socket attachments were also cemented. Complete dentures were fabricated over these attachments and

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placed on the photoelastic models. Light bodies silicone rubber was used to simulate oral mucosa.

Photoelastic models with dentures were divided into three groups:

Group A - Ball-socket type *(Photo No. 1)*

Group B - Bar type *(Photo No. 2)*

Five models with dentures were prepared for each groups.

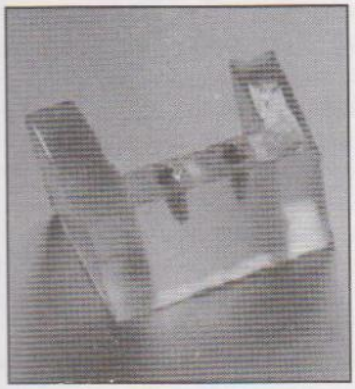

Fig. 1 : Ball-socket attachment

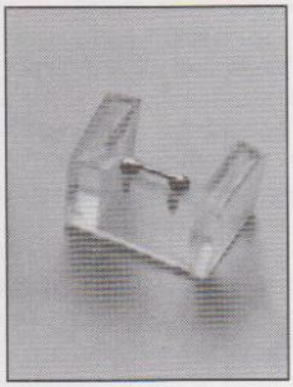

Fig. 2 : Bar-type attachment

JAW SIMULATOR *(Photo No. 3)*

The machine devised to generate masticatory strokes was named "jaw simulator". It generates 150 masticatory strokes per minute. It constitutes an upper jaw in which upper denture was mounted with the cast. It has a centrally located rod to hold the dead weights. The lower jaw is suspended with pins to hold the photoelastic model. A bigger gear of 10 inch diameter with 200 teeth and a pineal gear of 18 teeth is attached with quarter horsepower 1400 rpm motor. The bigger gear mounted on a double ball-bearing pedestal, was connected to lower jaw through a series of linkages. When the gear makes revolutions the lower jaw generate opening and closing movements through attached linkages.

The upper denture was fixed on the upper cast and the cast with the denture was fixed on 4" x 4" metal plate which was screwed in the upper jaw of the jaw simulator. The photoelastic model with denture was fixed to the same size of plates and screwed to lower jaw. Similar procedure was followed for all dentures. The jaw simulator mounted with dentures was placed between light source and the analyzer on polariscope anteroposteriorly such that light from the source passes through the photoelastic models uninterruptedly. *(Photo No. 4)*

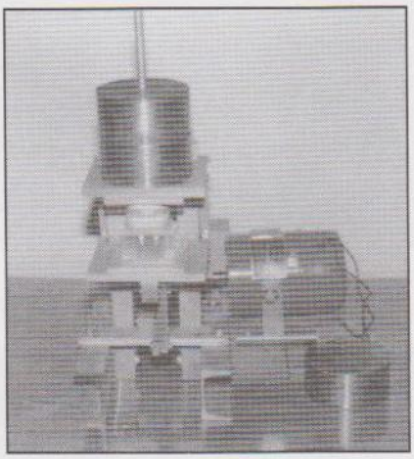

***Fig. 3 :** Jaw simulator with mounteddentures loaded with dead weights*

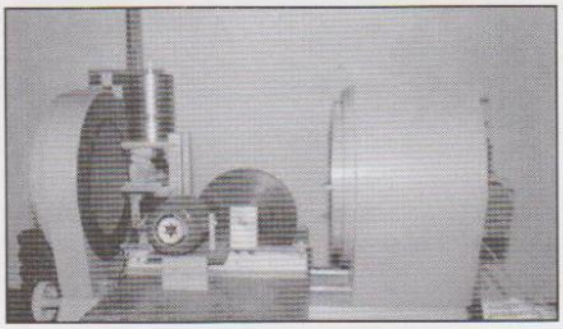

***Fig. 4 :** Jaw simulator mounted on polariscope*

Still photographs of dentures were taken in non-stressed conditions. For loading the dentures dead weights of 5, 10, 15, 20, 24, 30, 35, 40, 45 and 50 lb were used. The dentures were first loaded by 5 lb and jaw simulator was made to perform movements and stress fringes were photographed *(photo 5 and 6)*. The load was gradually increased upto 50 lb. Sequential photographs with Canon fully automatic camera were taken after every increase of 5 lb weight. The same procedure was repeated for every sample of each type of overdenture.

RESULTS

In this study vertical load was applied under dynamic loading conditions in three different types of overdenture attachments to the abutment, stress pattern

was observed, fringe values were calculated and statistically analysed. Results obtained are shown graphically. *(Photo No. 7)*

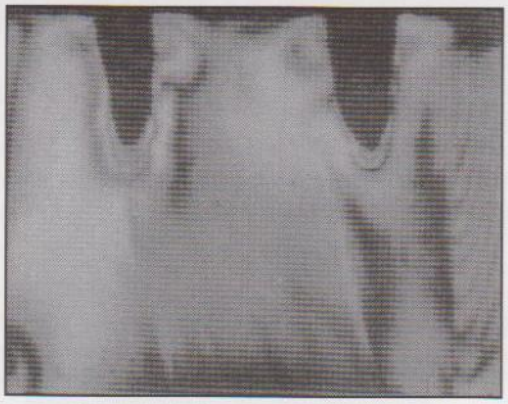

***Fig. 5** : Stress fringes for ballsocket attachment*

***Fig. 6** : Stress fringes for bar-type*

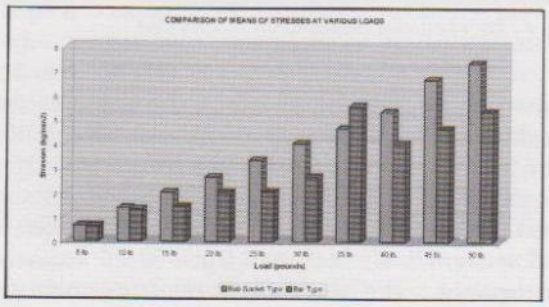

***Fig. 7** : Comparison of means of stresses at various loads*

DISCUSSION

Overdentures are prosthesis supported by one or more natural teeth with the objective of preserving the remaining supporting tissue and to restore lost tissues in such a way to provide maximum service for maximum amount of time. The nature of stresses produced by forces on overdentures, relation between attachment systems of overdenture and stress distributions is vital aspect in different prosthetic placement. Force transmission characteristic of the attachment is the most important factor in overdenture design.

Favourable stress transmission through attachments to abutments and other structure ultimately helps in achieving the primary goal of overdenture therapy. The most desirable criterion for the selection of overdenture attachment system is the way these attachments transmit the stresses to the supporting structures. The sharing of stresses by the abutments in cross-arch manner as well as between abutments and posterior edentulous ridge is always beneficial for preservation of residual ridge and health of the periodontal ligament.

In the oral cavity teeth are subjected to dynamic loading conditions, hence the present study evaluates the stress patterns around the apex of abutment teeth using photoelastic model representing human mandible under dynamic vertical loading conditions.

The photoelastic models employed in this study revealed that varying degree of stresses are produced by different abutment designs at variable loads. Stress transmission through overdenture attachment in the photoelastic model is influenced by many factors viz. amount of force, retention of overdenture on the abutments, area of contact of load with overdenture attachment, direction of the loading, shape and size of root of abutment, inclination of abutment tooth, interarch relationship, etc.

Between two different overdenture attachments used in the present study, the ball-socket type of attachment transmitted maximum amount of stress. Maximum retentivity of this attachment accounted for maximum stress transmission.

In a study of overdenture attachments Warren and Caputo in 1975 found that there was a direct relationship between stability and retention that each design provided and the amount of stress and torque transferred to the supporting structures. The most retentive design tended to produce most severe stress concentration around the supporting alveolar bone. Similar results were obtained by Thayer and Caputo in 1977 and 1980.

The tissue bar attachment design transmitted lesser concentration of stresses as compared to ball and socket design. The reason being tissue bar allowed freedom of movement for the denture. Therefore stresses were shared between abutments and residual ridge.

The force transmission characteristics of these attachments must be considered during the selection of the attachment systems along with the other factors like laboratory expertise, time, cost, periodontal health of teeth, inter-arch distance and length, shape and size of root of teeth.

For maximum stress distribution the best way is to fabricate an overdenture attachment design with maximal distribution load between attachment and residual ridge, resiliency between attachment and denture so that there is some freedom for the movement of dentures in relation to residual ridge so that forces coming on the abutment can be favorably distributed between abutments and the residual ridge.

All overdenture attachment designs which result in an overall reduction of stress to the supporting structures through sharing of occlusal forces, would provide the best potential for a favourable environment for abutment teeth and residual ridge.

CONCLUSION

The following conclusions are drawn in the present study after the evaluation of stresses transmitted to the abutments by photoelastic stress analysis-

1. There is difference in the character of stress transmission for two different overdenture attachment designs at various loads.
2. The ball-socket attachment transmitted highest amount of stresses to the abutment teeth.
3. As the retentivity of the attachment system increased, there was increase in the stress concentration around apex of the abutment teeth.

Abstract

Effect of photo polymerization variables on composite hardness.

Statement of Problem : Variation in light-polymerization parameters such as light intensity and light to material distance may affect the physical characteristics of polymerized resin.

Purpose : To characterize the relation between total light energy and the final hardness of four composite polymerized under varying condition.

Materials and Method : Four commercial composite restorative resin (Z 100 A -, Filtek A – 110, Tetric ceram, Tetric flow were used to prepare 4 disk shaped specimen (6 x 2 mm) for each experimental condition. Photo activation was carried out with a light device and energy of 22.6, 15.7, 9 or 6.7 J/cm^2.

Either light to material distance (, 5, 10, 15 mm) or activation time (40, 28, 16, 12 sec) was varied. Immediately after polymerization, Barcol hardness was determined on specimen surface. Analysis of variance P (0.5) and regression analysis were used to examine the data.

Results : No significance was found for the over all effect of the experimental variables (polymerization time and distance) but significant differences were found for slopes with in each material.

Hardness values were 3.0 to 3.5 for Tetric ceram, Tetric flow, Filtek A – 110 and approx. 4.9 for Z 100.

Conclusion : The hardness of the product analyzed was related to total energy used for activation.

The effect was dependent of the manner in which the amount of energy was modified. (Light – to – material distance or activation time).

Gender Difference in Harmony between Tooth, Face and Arch Form

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ABSTRACT

Anterior teeth selection forms the basis of the esthetic success of a complete denture. This comprises selecting the size, form and color of teeth. Various concepts have been offered to perform this task. Significant among this is the one by Leon Williams. It is about classification of human face form and tooth form into square, tapering and ovoid, and that tooth forms should harmonize with face form. Some recent studies analyzed corelation between face form and tooth arch form, the later also being classified similarly. While the above two concepts are popular, studies on gender difference in the harmony of tooth form to (a) face form, (b) arch form, are scarce. This study was conducted to analyse the same. 60 dentate undergraduate dental students, equal number of both sexes of age group 18-22 yrs were selected. Face forms were classified from their portrait photographs. Tooth form and arch form were visually analyzed and classified from their maxillary casts. The data obtained was statistically analyzed. Results from the study confirmed gender difference in the harmony, (a) between tooth form to face form - more in females, (b) between tooth form and arch form - more in males.

INTRODUCTION

Facial appearance has important social and psychologic effects on the human personality. The loss of natural anterior teeth can be devastating for the patients and their replacement with artificial substitutes such as dentures become a necessity. Prime objectives of complete denture fabrication include esthetics, function, phonetics, oral comfort and psychological well being. Anterior teeth selection forms the basis of the esthetic success of a complete denture. This comprises selecting the size, form and colour of the teeth. Various concepts have been put forward to perform this task. "Temperamental theory" which was conceived by the medical profession in the 5th century B.C. was introduced as the basis for tooth selection by J.W. White in 1972. Later, F.H. Berry observed a corelation between tooth form and inverted face form. At the turn of the last century, Leon Williams classified face form and explained the relationship of tooth form to face form and arch form. Lowery and Nelson proposed a close relation between face, tooth, arch alignment, and termed it the "Esthetic triangle". Pre-extraction records gave the contribution especially in selecting the tooth form and size. In 1955, Frush and Fisher explained the "Dentogenic concept" which was based on the sex, personality and age of the patient to produce highly personalized prosthesis. The objective of the study was to explore whether gender difference, if any, exists in the harmony of tooth form to face form, and tooth form to arch form.

Keywords : *Teeth selection, Face form, Arch form*

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MATERIALS AND METHODS

60 Dentate undergraduate dental students, equal number of both sexes of age group between 18-22 years were selected. Face form was classified as per the standardization given by Leon Williams. Hydrocolloid impressions of maxillary arch of the samples were made and cast poured in dental stone. From these study models, arch form was visually analyzed and classified as square, tapering and ovoid. The data obtained was statistically analyzed.

RESULTS

HARMONY OF TOOTH FORM TO FACE FORM

Out of the 30 males and 30 females studied tooth form to face form was similar in 6 males and 9 females, that is 20% of the males and 30% of the females.

Tooth form - face form

Tooth form	Male		Female	
	Agree	Disagree	Agree	Disagree
Square	6	18	9	12
Tapering	-	3	-	3
Ovoid	-	3	-	6

OF TOOTH FORM TO ARCH FORM

form to arch form was similar in 24 males and
females, that is 80% in males and 40% in females.

Tooth form - Arch form

Tooth form	Male		Female	
	Agree	Disagree	Agree	Disagree
	15	3	6	15
	3	-	3	-
	6	3	3	3

between tooth form and arch form was
significant in the square arched samples
of both sexes.

DISCUSSION

is a major component in the success of
denture treatment. Anterior teeth selection
most important step towards this success.
of the tooth form is one among the three
of the same. It is a well established concept
patient's features of face form and arch form
much of this. This study investigated the
difference in the harmony of tooth form to face
and arch form. Reports of similar studies are

harmony between tooth form to face form
more in females in this study was found to be
insignificant, it was observed to be very
significant in a similar study by Sellen et. al in
Another significant difference between these
is that, while this study concluded statistically
increase in harmony between tooth form and
form in males, the one by Sellen et. al concluded
insignificant more harmony between the
in females.

The finding of an increased tooth form to arch form harmony, in both gender, in the square arch form samples only, as seen in this study is an interesting observation.

SUMMARY AND CONCLUSION

1. *Harmony between tooth form and face form is* predominant in females. This has only numerical value and no statistical significance.
2. Harmony between tooth form and arch form is predominant in males and this is highly significant statistically.
3. The harmony between tooth form and arch form is greater in the square arched samples irrespective of gender.
4. No theory or concept about anterior teeth selection may be universally applied to all clinical situations. Many patient-specific factors influences it's application and gender difference is important among them.

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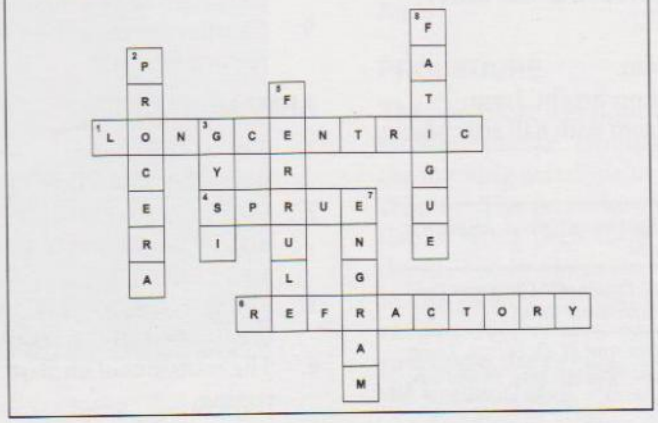
PROSTHODONTIC WORD POWER - 1 ANSWER



Immediate Loading of Transitional Implants to Support the Mandibular Overdenture

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ABSTRACT

It has been reported that for implants to become osseointegrated, they must heal in the absence of functional loads for 4 to 6 months. To address patients demand for uninterrupted immediate function and esthetics, Transitional Implant and Prosthetics System has been developed. This case report describes the use of transitional implants to support a removable mandibular overdenture, methodology, the advantages and disadvantages of the system. The transitional implant system is a sound and economical method of immediate patient restoration that allows for the protected healing of submerged implants.

INTRODUCTION

Transitional implant is one of the latest advancement in implantology .Immediate loading is possible and the patients don't have to endure the embarrassement of not having teeth during lengthy osseointegrated period. This is an innovative easy-to implement system[1]. It is amazing what the patient can get with a little help from transitional implant . This allows patients to enjoy comfort immediately following implant surgery.

APPLICATION OF TRANSITIONAL IMPLANT

1. Provisional Restoration of the edentulous ridge.
2. Avoiding pressure on newly placed implants by supporting the denture on transitional implants
3. Stabilising denture

SPECIFICATION OF TRANSITIONAL IMPLANT:

1. Diameter 2.4mm.
2. Threaded body length 13mm.
3. Smooth trans-gingival section height 3mm.
4. Square supra-gingival abutment with ball attachment

Key words: *immediate loading transitional implants supported mandibular overdenture*

The paper was read at 28th Indian Prosthetic Congress held at Chandigargh on 22nd – 23rd November 2000.

PG Student, Professor.**, Professor and H. O. D.,***, Dept. of Prosthodontia, Saveetha Dental College and Hospitals, Chennai – 77, TN.*

FACTORS ASSOCIATED WITH THE SURVIVAL OF IMMEDIATE LOADING IMPLANTS

1. Intimate initial fit .
2. Dense cortical bone
3. High percentage of implant in contact with bone cortex
4. No micromovement during bone remodeling

Thus the preparation of the implant bed is very important and insertion torque must be high. The primary stability of the implants has to be excellent. Immediate loading protocol can be followed and periodic evaluation is critical for the success of the treatment.

PRELIMINARY GUIDELINES FOR EARLY LOADING

1. Immediate loading should be attempted in edentulous arches only to create cross – arch stability. This prevents micromovement of implants.
2. Implants should be at least 10mm long.
3. A diagnostic wax-up should be used for template and provisional restoration fabrication.
4. A rigid metal casting should be used where possible.
5. A screw -retained provisional restoration should be used where possible.
6. If cemented ,the provisional restoration should not be removed during the 4 to 6 months healing period.
7. All implants should be evaluated with Periotest
8. The widest possible anterior - posterior distribution of the implants should be utilized to provide resistance to rotation forces .
9. Cantilevers should be avoided in the provisional restoration.

ARMAMENTARIUM

1. The contra -angle handpiece is used with a reduction speed unit (1000 r.p.m).
2. Drills used are marking drill, pilot drill, guiding drill and twist drill is used with diameter of 1.8mm and 2mm. *(Fig. 1)*
3. The insertion tool and hex ratchet is used do drive the implant in the position.
4. The transitional implant is a one piece implant and coping.

Fig. 1 :

CASE REPORT:

A 56 year old male patient with missing teeth came to the clinic and wanted replacement *(Fig. 2,3,4)*. On oral examination the edentulous mandible was classified as group B and bone height was 15mm which was sufficient bone height *(Fig. 5)* and width. Treatment plan diagnostic cast, was made. Template was made.

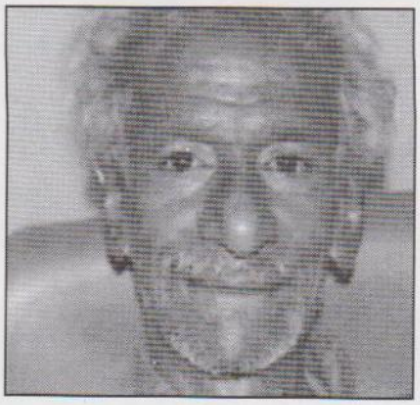

Fig. 2 :

Fig. 3 :

Fig. 4 :

Fig. 5 :

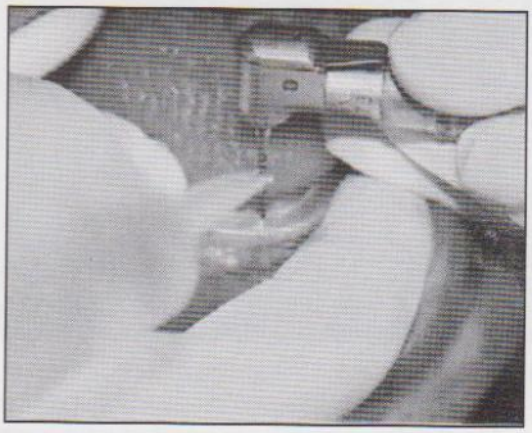

Fig. 6 :

PROCEDURE

The procedure was done in the stage 1 of surgery under local anesthesia. Template was placed in position and the marking was done in the mandibular canine region *(Fig. 6)*. The procedure was done without raising the flap. Drilling with 1000 rpm was done to the desired depth .The implants on the insertion tool were placed in the desired position and driven in with the hex ratchet. Nylon caps on the implant partially fill the cavities in the denture with self cure resin and fit over the implant. *(Fig. 7,8,9)*.