

Gypsum Index for Complete Denture

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Abstract

➤ Introduction

Complete denture treatment requires arrangement of teeth tooth by tooth. As the alveolar ridges are well formed and Ideal; resorbed and thick; resorbed, small and thin at the crest. This article mentions use of Complete denture Gypsum Index that can be used when the patients ridge is conforming to Type 1,2 or 3 as mentioned above.

➤ Aims

1) Using plaster index as a guide for teeth arrangement in Type 1,2,3 arch forms.

➤ Methods

Teeth arrangement was done for Ideal edentulous cast after fabricating self-cure denture base, occlusal rims mounted with Class 1 ridge relation. A wax extension was made around the middle third of the buccal aspect of the denture teeth, measuring 2 mm laterally and 2 mm in thickness. This wax extension is positioned laterally and covers all the teeth. Plaster was mixed in Ideal w: p ratio and an index was fabricated on the occlusal surface of the teeth. Index measured 5 mm in thickness at the occlusal cusp area and involved the wax extension laterally. Plaster was allowed to set.

➤ Results

Teeth Arrangement Index made for Ideal Ridge conditions. Conclusion- A Plaster occlusal index is a guide that can be used for teeth arrangement if the ridge conditions allow.

Keywords:- Gypsum Cast, Dental Plaster.

I. INTRODUCTION

Geriatric patients need to be rehabilitated with complete Denture prosthesis. Maxillofacial Prosthodontics is a branch that replaces maxillofacial structures with artificial prosthesis. End of life care involves immediate need to restore normal function before a final prosthesis is fabricated. Lab assistants deal with designing prosthesis in large number. When it comes to complete denture prosthesis an index to fit the ideal arch, resorbed arch with normal ridge height, completely resorbed arch with thin ridges, will help in screening for the arch type and shape; also can be used as a guide for teeth arrangement if the arch form is found to match. Ideally, time taken for arrangement of 1 set of complete denture is approximately 45 minutes.

Hence this article mentions use of an occlusal index that helps in orienting the teeth to save time.

II. MATERIALS AND METHODS

Ideal Class I casts are lab mounted on Hanau H articulator with a mounting Jig. Teeth arrangement was done for class I relationship. A wax strip is melted and placed around the buccal surfaces of the teeth at the level of middle third. Modelling wax is used to make this wax extension. Thickness of the wax strip is 3 mm. The breath is about 4 mm and it is extended till the last teeth.



Fig 1:- Wax Strip- 3mm Breadt



Fig 2:- Ideal Cast and Wax Up

A thin coat of Vaseline is coated on to the surfaces of the teeth to aid in easy separation of the index.

Plaster is mixed in thin consistency and applied on to the occlusal surfaces and thickness is kept to 1 cm and plaster index is flattened and finished with sand paper to remove the roughness. Plaster index is removed once it sets. The posterior over extension at the II molar area is shortened with a model trimmer. Plaster index is retrieved.



Fig 3:- Plaster Index

Plaster index is placed on the primary cast and is assessed for suitability.

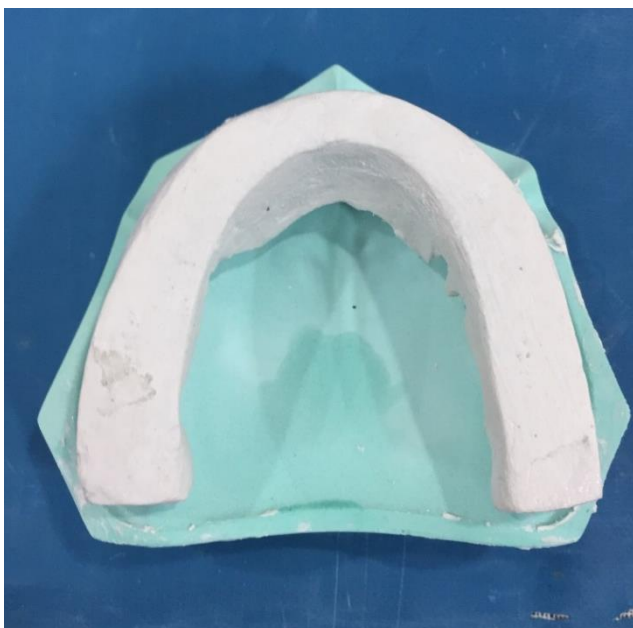


Fig 4:- Index Places on the Ridge to Check for Suitability

Then teeth are placed in the mold which can be secured with a thin strip of wax.



Fig 5:- Teeth Placed in the Index and Secured with a Thin Strip of Wax to Prevent them from Falling when Inverted

On the denture base a thin sheet of wax is adapted and this index with the teeth in it is inverted. Teeth are separated from the index slowly by pinching off the wax that was used to secure the teeth. Vertical dimension can be altered by increasing/decreasing the thickness of the wax placed on the denture base.

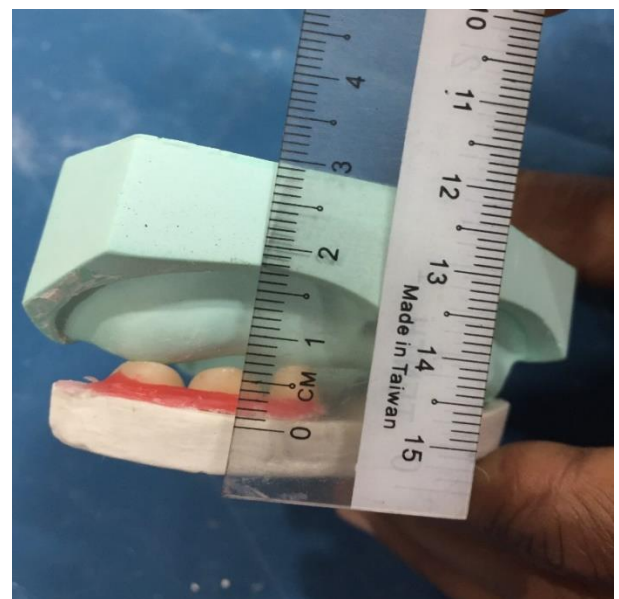


Fig 6:- Checking the Vertical Dimension

Teeth are checked for correct positioning. Wax up is completed, finishing and polishing done.

III. DISCUSSION

Teeth arrangement for completely edentulous arch by the dentist or a lab assistant takes about 45 minutes, and needs to be done in the dental lab. There have been few articles mentioning fabrication of new dentures by using silicon index to replicate the old dentures and broken dentures.⁵ There is no study done in the past to consider fabricating a plaster index for different ridge types, that can

be stored for reuse. This article mentions using a Gypsum occlusal index that can be used as a guide for arranging teeth for ideal arch, resorbed arch with good vertical height, or completely resorbed arches. This index can be used as an index for teeth arrangement in cases of immediate dentures, in clinic try-in after jaw relation, immediate denture in maxillofacial prosthesis. Gypsum index also helps lab technicians in doing teeth arrangements in short span of time. Gypsum occlusal index is simple to fabricate and can be stored for future use.

Hence Gypsum index is a useful tool for teeth arrangement, when presented with ideal ridge types.

IV. RESULTS

- Index can be used as a guide for teeth arrangement.
- Useful in Immediate Denture.
- Index can also be used to arrange teeth in maxilla-facial prosthesis

V. CONCLUSION

Gypsum index for complete denture is a guide for teeth arrangement for ideal ridge, resorbed ridges. Shortens the time taken for teeth arrangement and can also be stored for future use. Can be used in office after jaw relationship. Index is useful in dental labs when there are many dentures to be fabricated. Index can also be made of acrylic or metal when strength of plaster is questionable

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