Palatogram Utilization for Phonetic Adaptation in The Maxillary Full Denture

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Background

There were many cases in phonetic disruption or unclear pronunciation after first insertion of maxillary full denture.

Less evaluation in phonetic function ->
Most evaluations are in aesthetic, mastication system, and patient's comfortable.
Factors affecting adaptation of maxillary full denture

- Patient’s experience
- Gender
- Age
- Rugae’s duplicate
Importance of adding rugae’s duplicate into the maxillary full denture to increase phonetic adaptation
Literature Review

Anatomy and Physiology of Palatal Rugae
Literature Review

Classification of Palatal Rugae

- Fragmentary:
  - Primary (>5mm)
  - Secondary (3-5mm)

- Wavy
  - Straight
  - Curved

- Perpendicular:
  - Backward
  - Forward

- Converging
  - Diverging
Role of Palatal Rugae in Prosthodontics

- Increase the sound quality of full denture
- Increase Phonetic Adaptation
Steps to Duplicating Palatal Rugae

Record the rugae with putty elastomeric.

Cut the wax in 1 mm as a "stop" in three sides. Apply the separating medium on the model and put the acrylic.

After the acrylic has setting, take it from model with air spray, and then trim it.
Steps to Duplicating Palatal Rugae

Move the palatal rugae area from the base and apply the palatal rugae's duplicate.

Add wax on base, invest, and flasking
Literature Review

Palatogram

- Palate's speaker reviewed by black powder - Speaker usually pronounce the single consonant
- In Articulation: the tongue will removes the powder on several parts - Use mirror to take the photo
- The images: The place of articulation on erased area where the powder is spreaded - palatogram
Literature Review

**Palatogram**

- **Consonant n (apical-alveolar)**
- **Consonant l (apical-alveolar)**
- **Consonant d (apical-palatal)**
Literature Review

Palatogram

Consonant t (apical-palatal)

Consonant s (apical-alveolar)

Consonant z (apical-alveolar)
Literature Review

Palatogram

Consonant c (medial-palatal)

Consonant j (medial-palatal)
Conclusion

- Patients who lost their teeth -> Different in oral cavity and speaking habit
- Dentist must design the shape and expansion of the denture correctly -> restore the function of the teeth and oral structures
- One of them: restore the phonetic function simultaneously used as a clinical requirement in making an appropriate full denture
- Dentists need to know about the science of studies about phonetic so it can be used as a guide in making prostheses.
- One of the method is with palatal rugae's duplication
• Palatal rugae’s shape is stable because it does not change over time, and unchanged from the first form to the oral mucosa until it degenerates at the time of death.

• Its uniqueness in each individual serve as identification of individuals so that duplication of rugae must record on each individual.

• Duplication of rugae will form a certain patterns as close as normal palatum from the patient so it can help the patient in phonetic adaptation

• Using of palatal rugae's duplication is expected can reduce the disruption of phonetic adaptation in full denture patient. Palatogram can be used as a technique for assess the phonetic adaptation.


