

# One step border molding on removable prosthesis

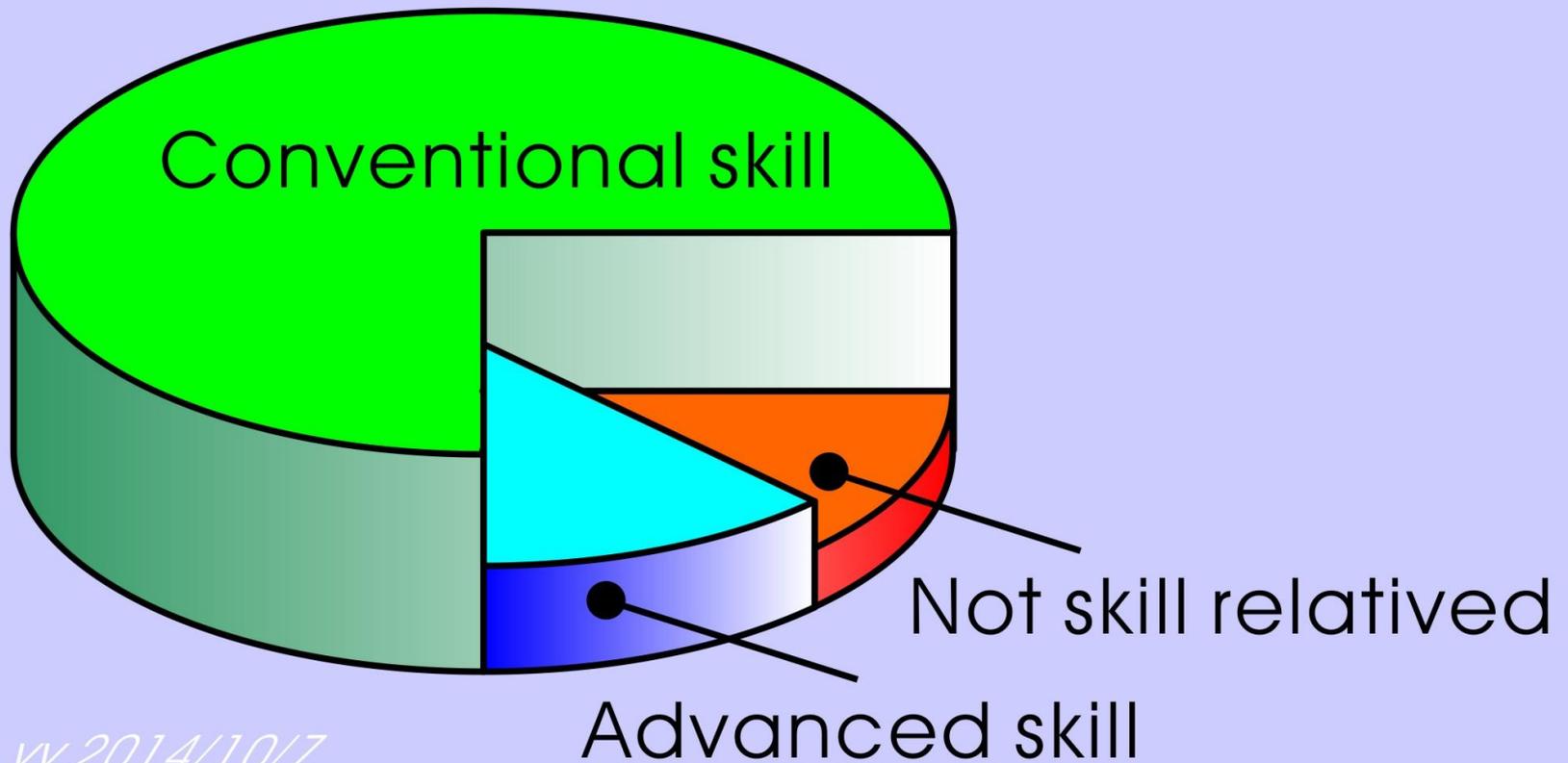
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# What border molding can offer?

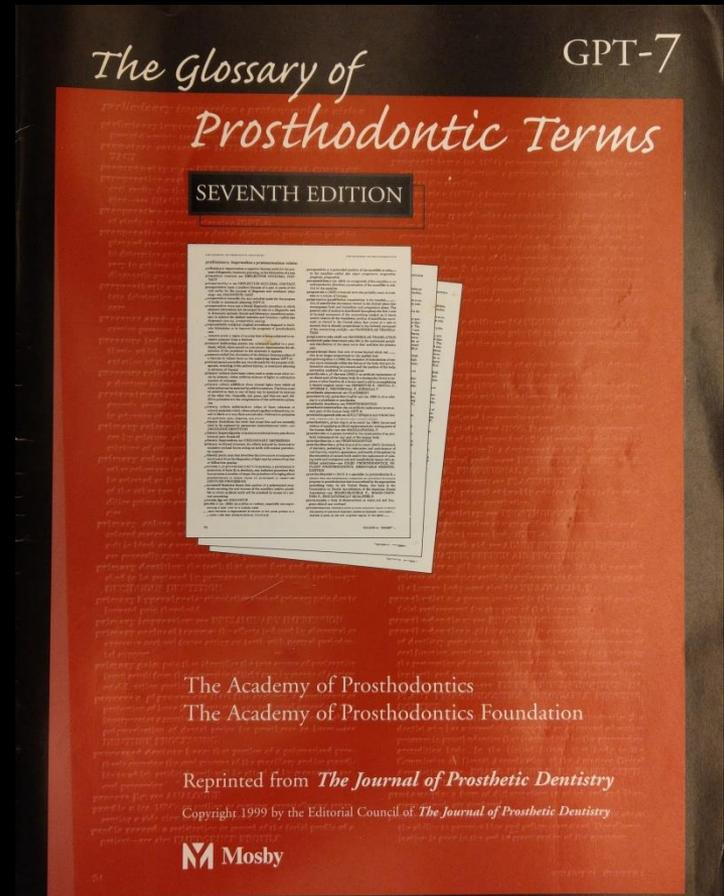


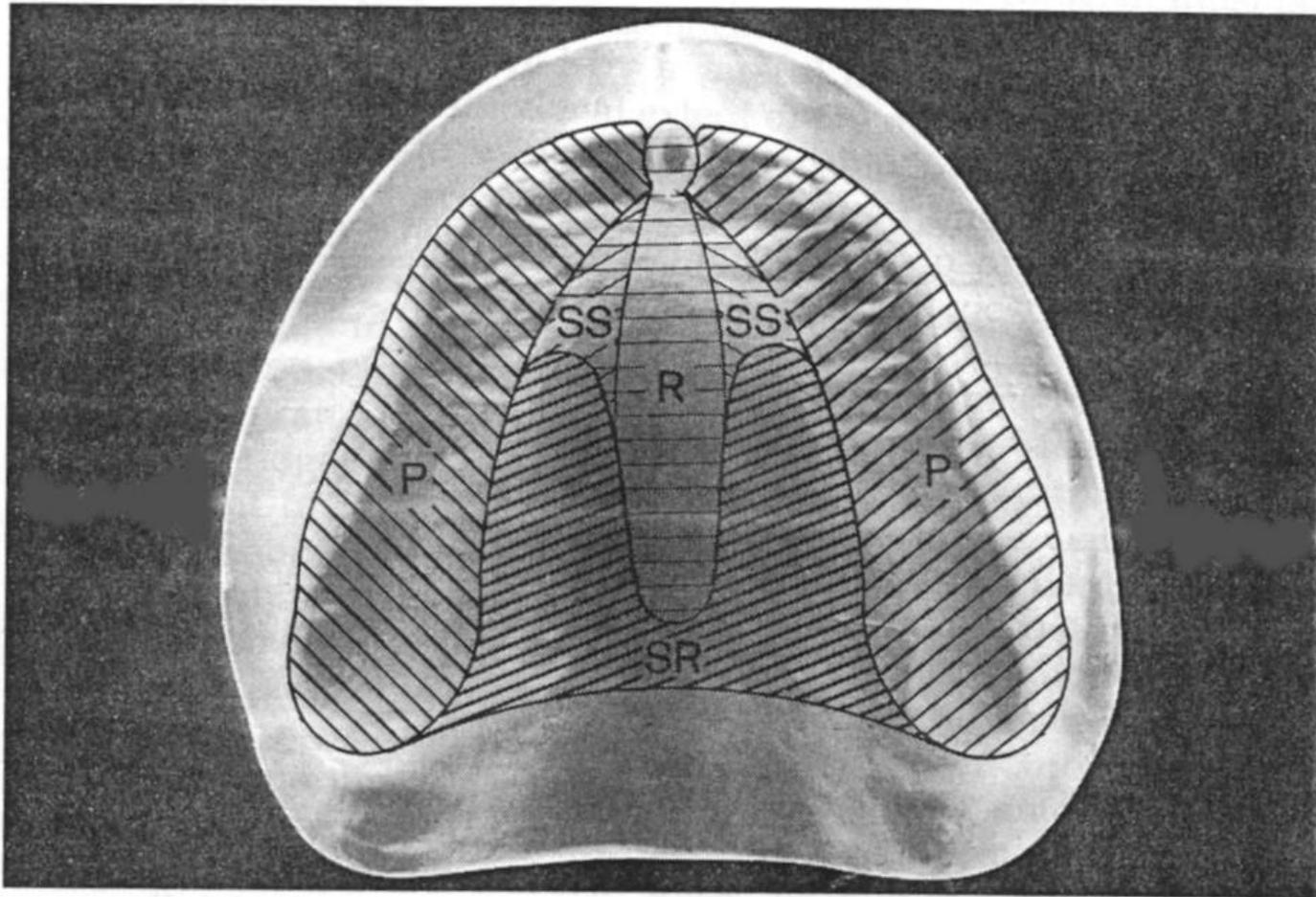
# Impression philosophies of CD

David A. Felton, Lyndon F. Copper

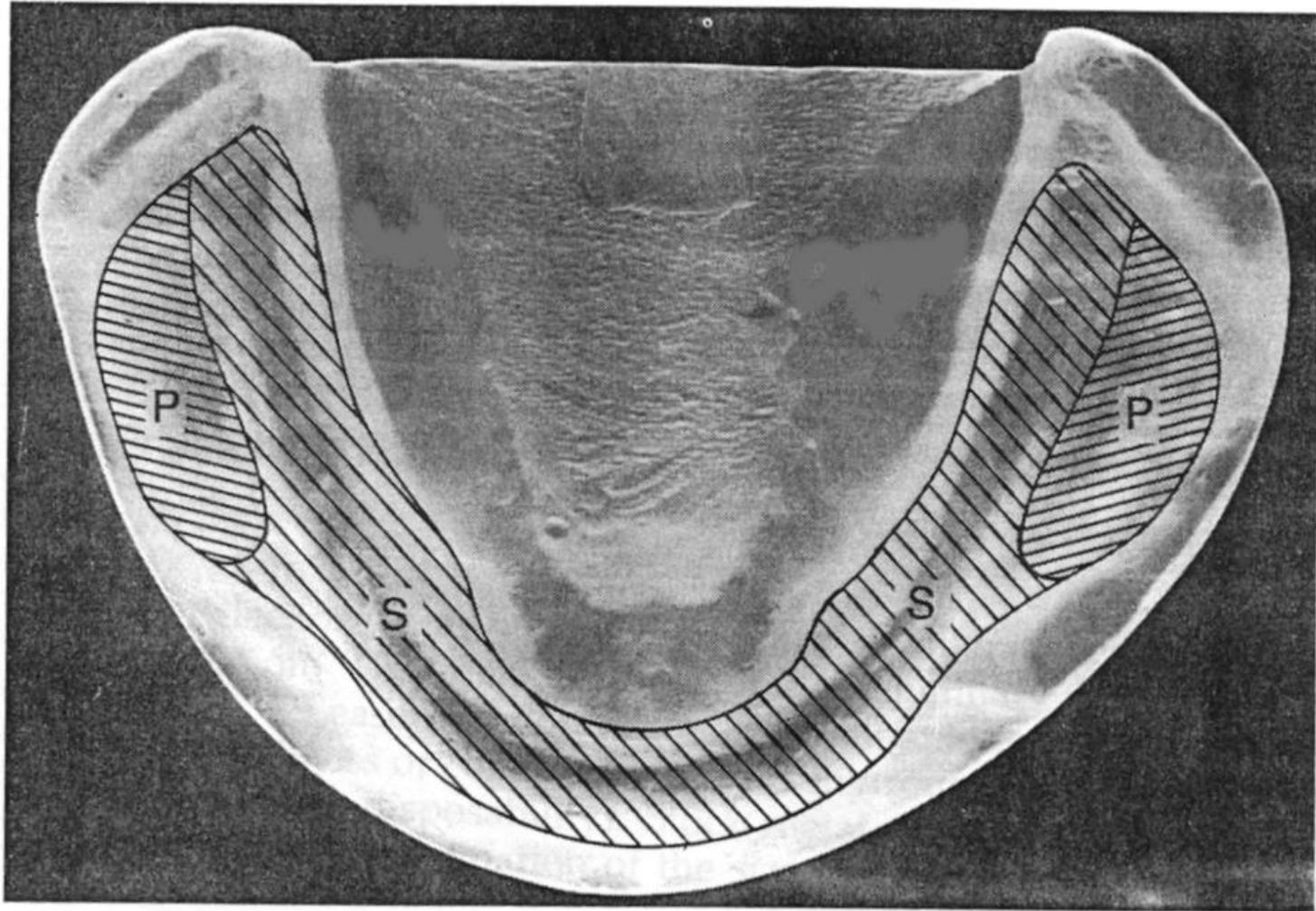
JPD,1996; 4(1): 39~51

- Low pressure technique (Mucostatic)
- Functional impression technique
- The selected pressure technique





**Figure 1.** Maxillary cast indicating primary [(P) (residual ridge)] and secondary [(SS) (rugae)] stress-bearing areas, secondary retention [(SR) (slopes of residual ridges)] area, and areas of necessary relief (R).



**Figure 2.** Mandibular cast indicating primary [(P) (buccal shelf)] and secondary [(S) (slopes of residual ridges)] stress-bearing areas.

# 3M of successful denture impression

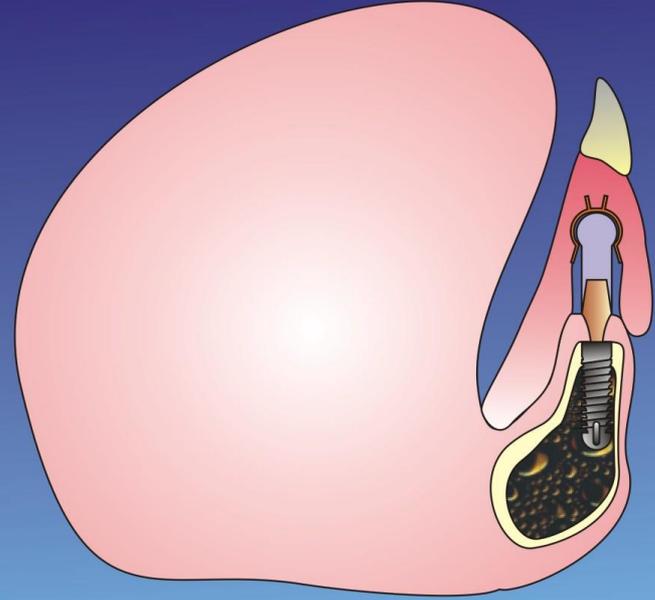
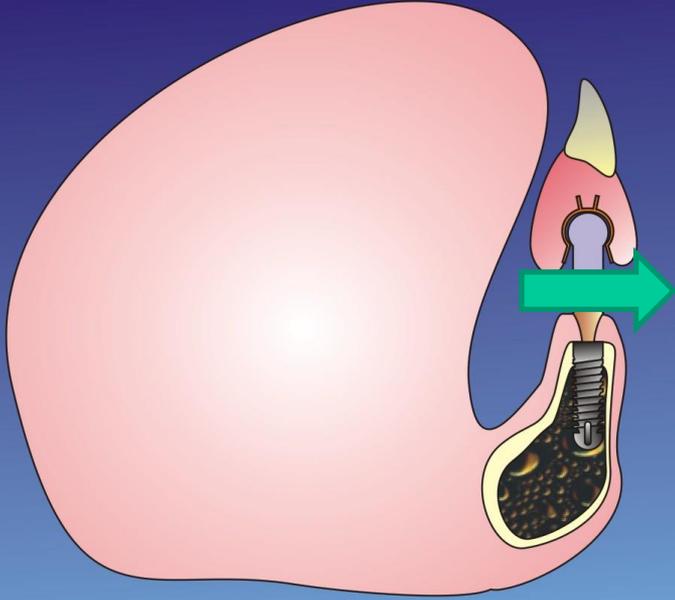
- Mold
- Material
- Method



- 1) Preliminary impression
- 2) Master impression

# Mold:

1. Rigidity
2. Easy modification
3. Anatomic coverage
4. Stability



# Review of anatomic coverage

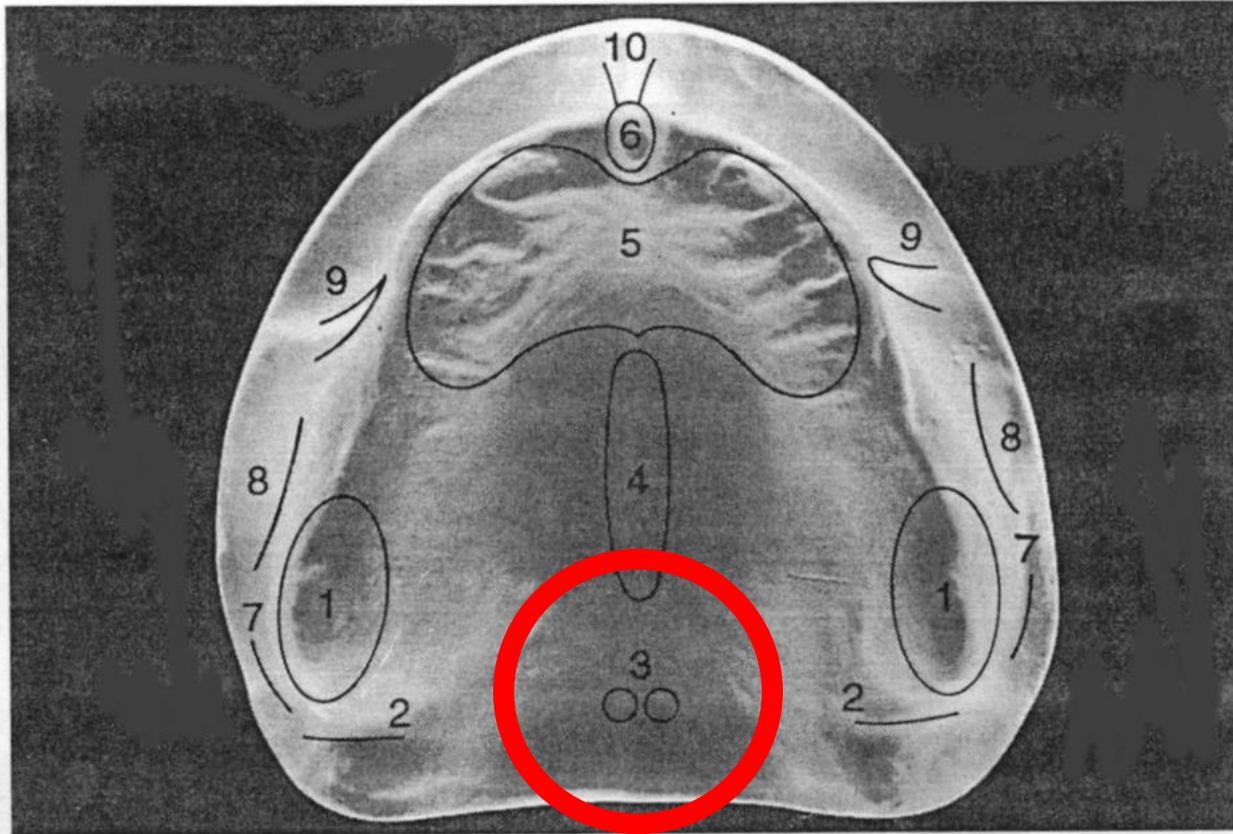
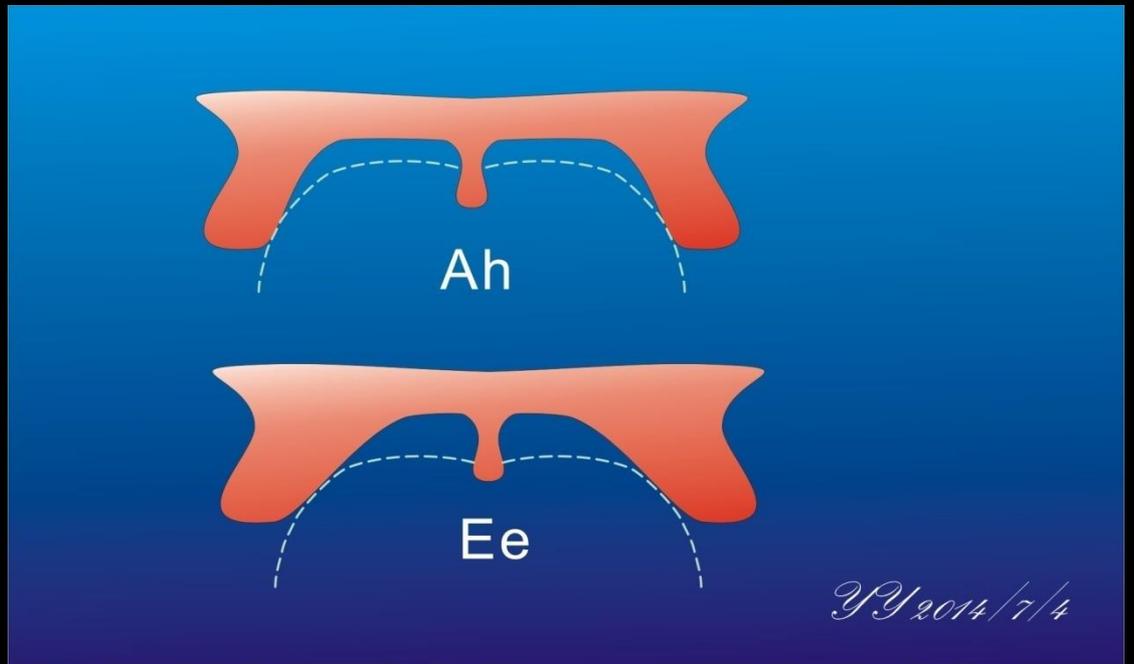
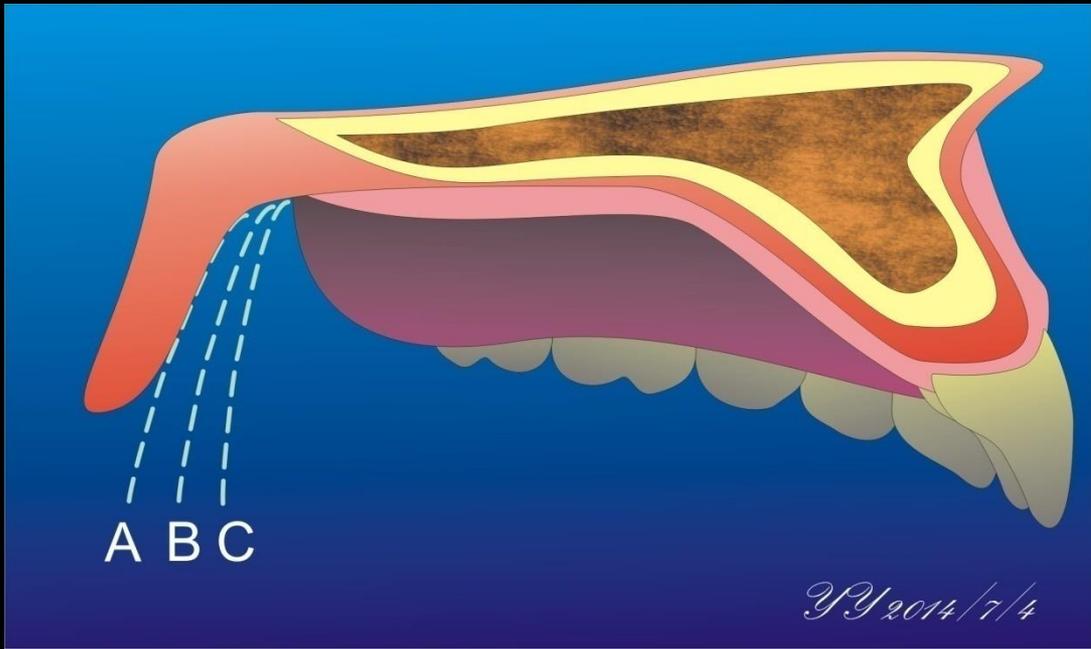


Figure 2. Maxillary diagnostic cast indicating duplication of anatomic features. 1 - tuberosities; 2 - alveolar ridges; 3 - alveolar ridge; 4 - alveolar ridge; 5 - hard palate; 6 - alveolar ridge; 7 - buccal slope of tuberosities; 8 - lingual slope of tuberosities; 9 - alveolar ridges; 10 - alveolar ridge.

Boucher's Prosthodontic treatment for edentulous patients, 1982, 8<sup>th</sup> edition, P140 / P412.....?

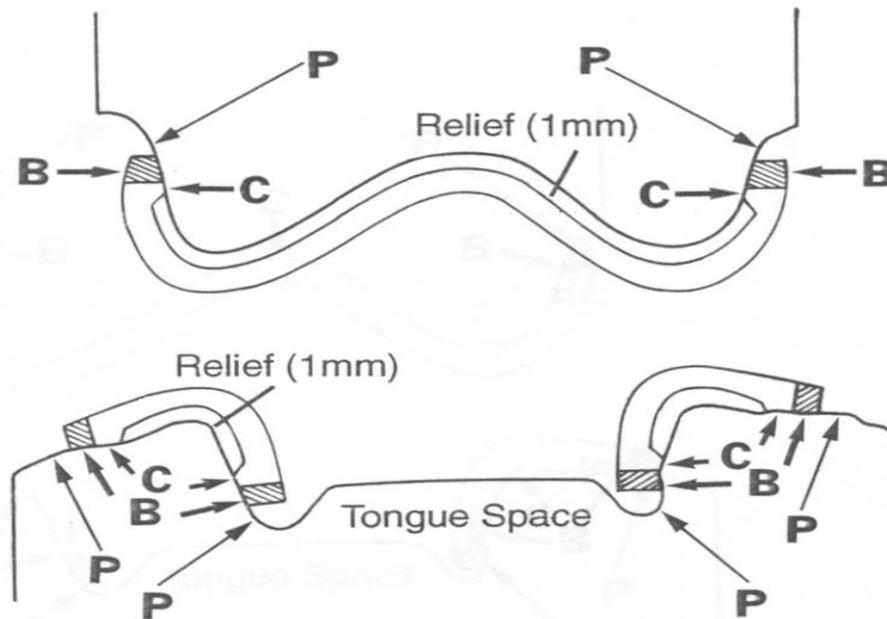




**Figure 4.** Mandibular diagnostic cast, indicating duplication of anatomic features. 1 = buccal shelf, 2 = masseteric notch, 3 = retromolar pad, 4 = retromylohyoid fossa, 5 = alveololingual sulcus, 6 = buccal vestibule, 7 = buccal frenum, 8 = labial frenum, 9 = lingual frenum, and 10 = labial vestibule.

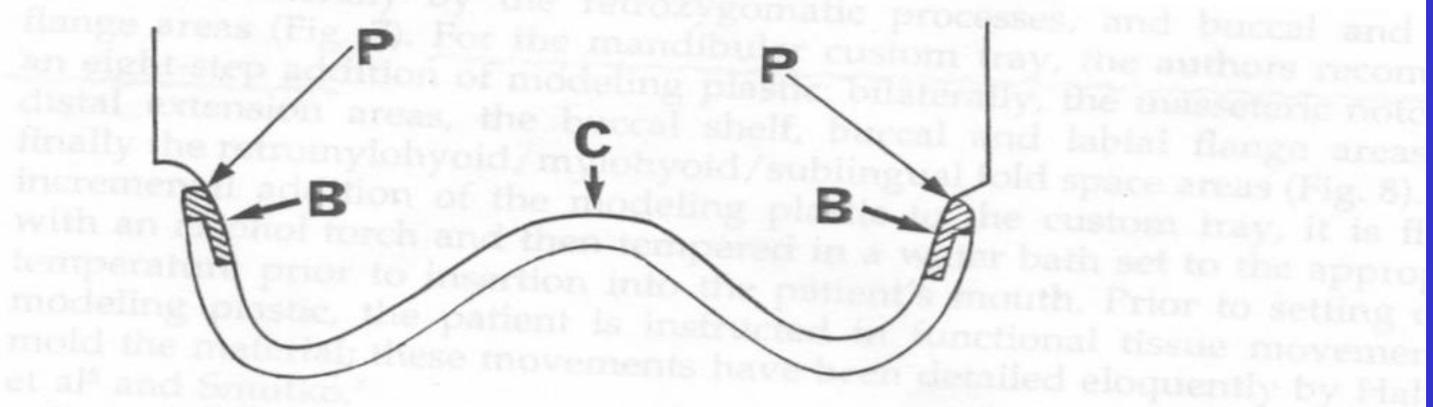
# Individual tray fabrication

## Boucher technique

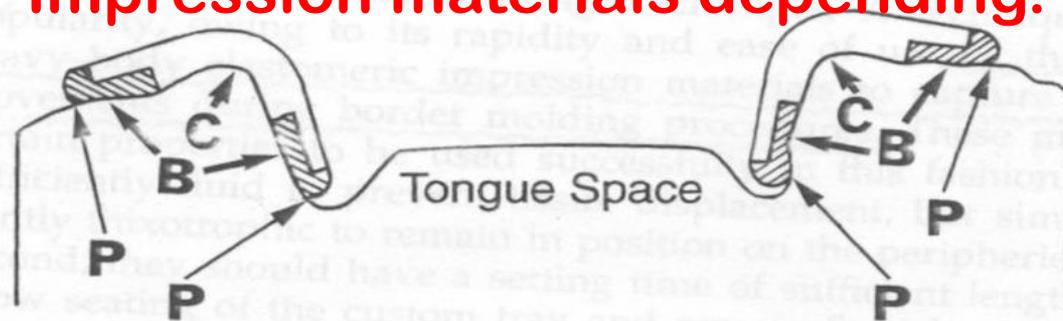


**Too bulky to manipulate!**  
Figure 5. Cross-sectional view of maxillary and mandibular trays (Boucher technique), indicating relief areas, border-molding material (B), and contact of custom tray with edentulous anatomic structures (C). Note that the border-molding material is cut back short of the intended peripheral extension of the impression (P). A wash impression will be used to capture the anatomic structures in the relief and periphery areas.

# Halperin technique



- Impression materials depending.

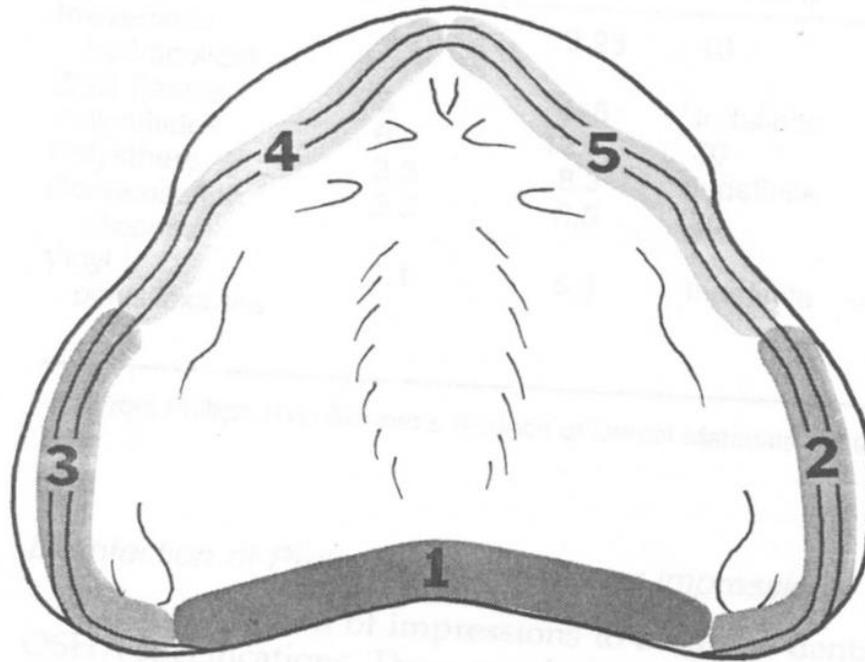


**Figure 6.** Cross-sectional view of maxillary and mandibular casts (Halperin technique), indicating lack of relief areas, border-molding material (B), and contact of custom tray with edentulous anatomic structures (C). No wash impression is used in this technique. Consequently, the border-molding material is extended to the intended peripheral extent of the prosthesis.

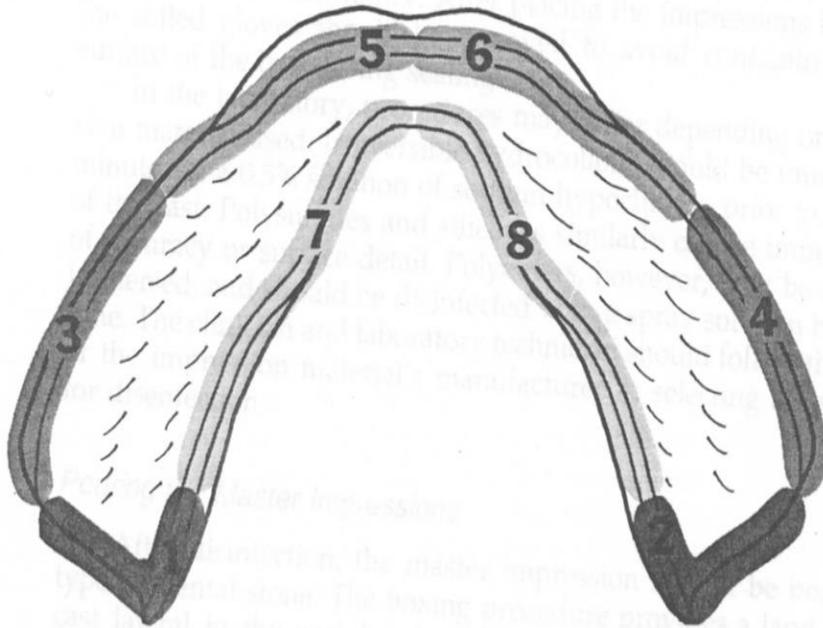
# Review of one step border molding technique

- Lawrence S. Lipkin 1988, JPD;60(3): 399 **Soft compound syringe loading technique**
- George A. Kirk, John E. Holt 1985, JPD; 53(4): 598~599 **Perio-pack rolled rope technique**
- Ali Bolouri 1977, JPD; 37(1): 89~91 **Wax & self-curing acrylic resin technique**

# Sequence of CONVENTIONAL border molding



**Figure 7.** Interior aspect of the maxillary custom tray showing the five-step addition of modeling compound used for border-molding procedures on the maxillary custom tray. The posterior palatal seal area is recorded first (1), followed bilaterally by the retrozygomatic processes (2, 3), and finally, by the buccal and labial vestibules (4, 5).



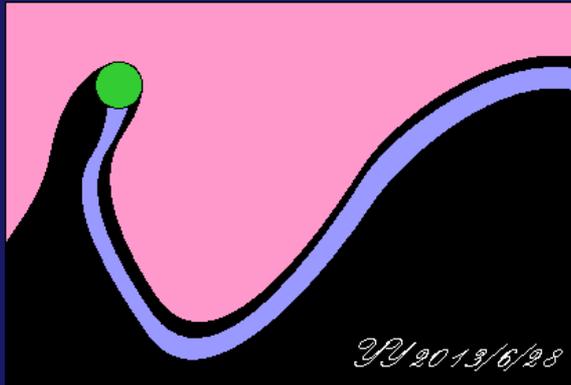
**Figure 8.** Interior aspect of the mandibular custom tray showing the eight-step addition of modeling compound used for border-molding procedures on the mandibular custom tray. The masseteric notch and distal extension areas are captured first (1, 2), followed by the buccal shelf/buccal vestibule areas (3, 4), labial flange areas (5, 6), and finally, by the retromylohyoid/mylohyoid, and sublingual fold spaces (7, 8).



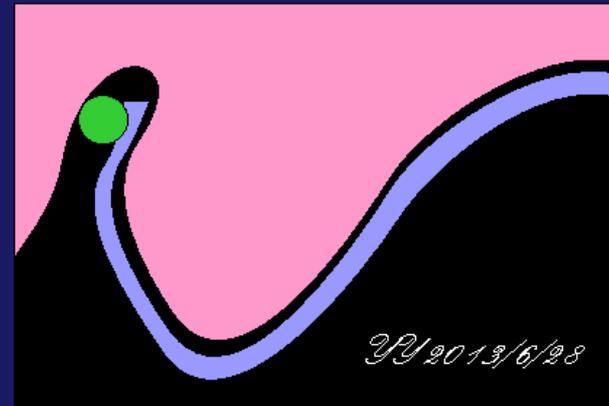
Suggestion: symmetric approach  
 Cross landmark approach

# Problems of CONVENTIONAL border molding

a. Orientation ?

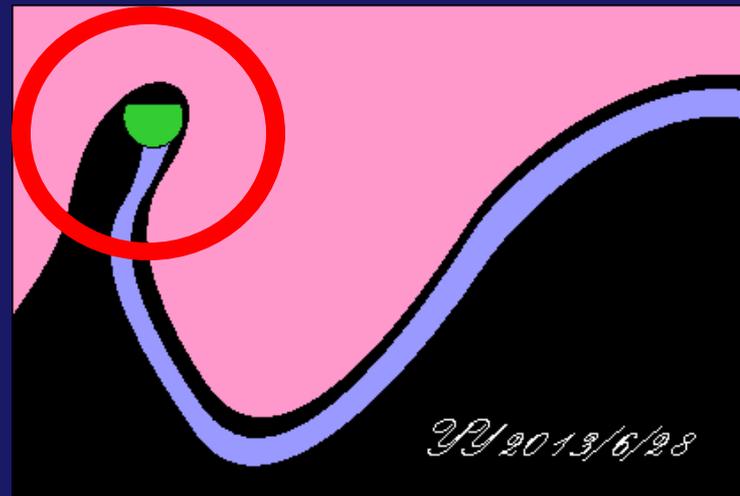


*Boucher technique*



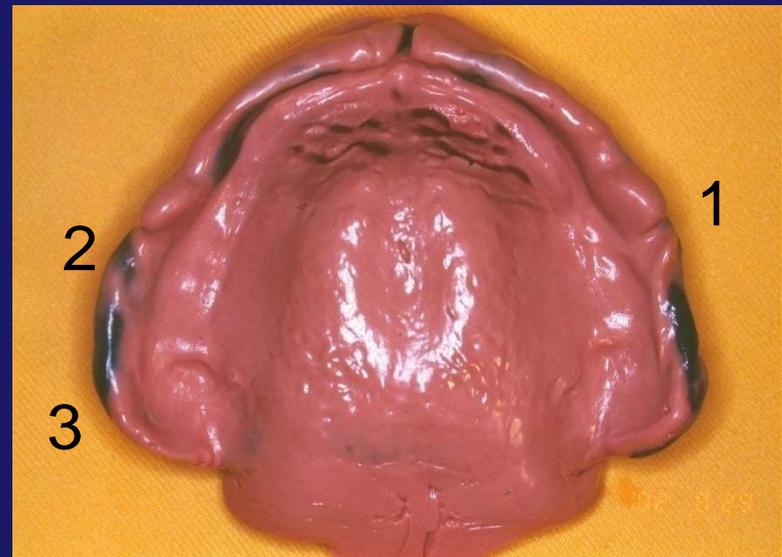
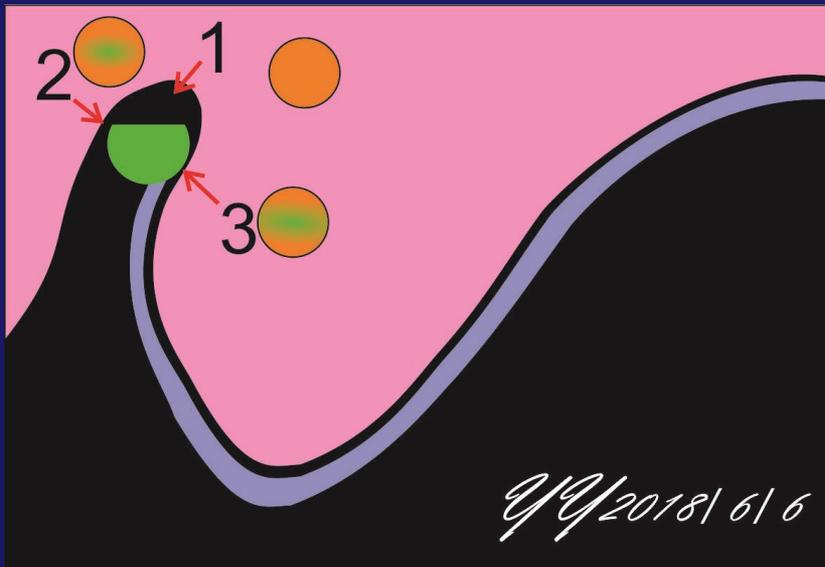
*MacGregor technique*

b. cut-back ?

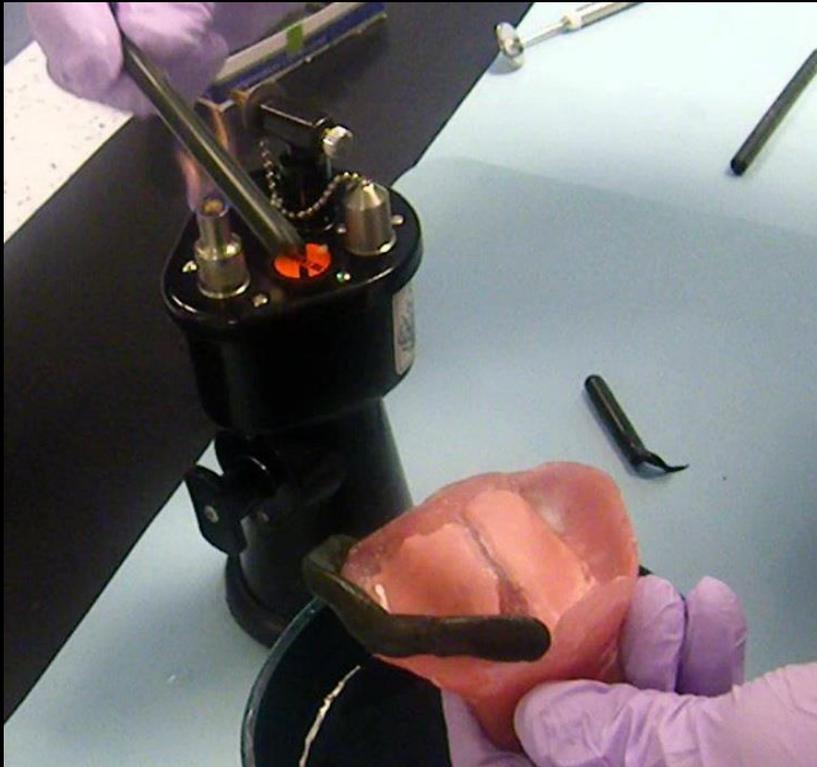


What's wrong if  
border molding substance  
exposed within impression material?

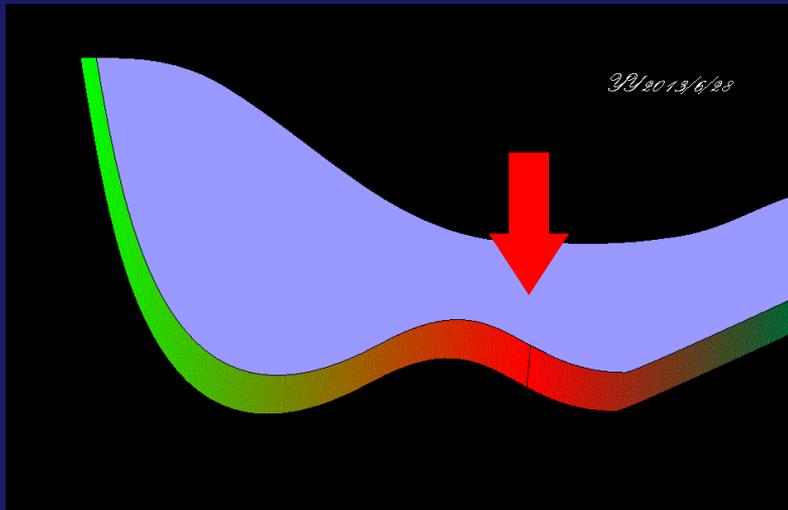
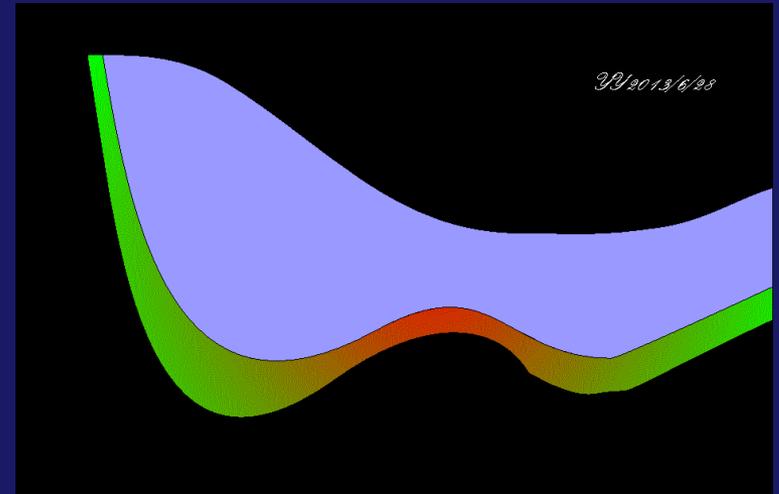
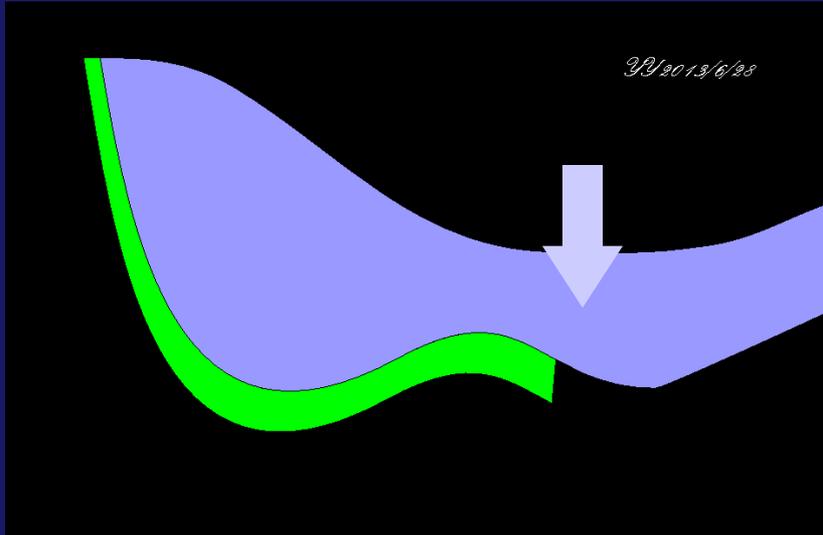
What's wrong if  
border molding substance  
became a part of border seal?



- Peri / Iso compound
- scalpel / knife
- torch
- Tempering unite
- Medicament of burned wound !



# c. Thermal stress



*Inherent distortions*

著者の略歴



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from 25. June. 1988

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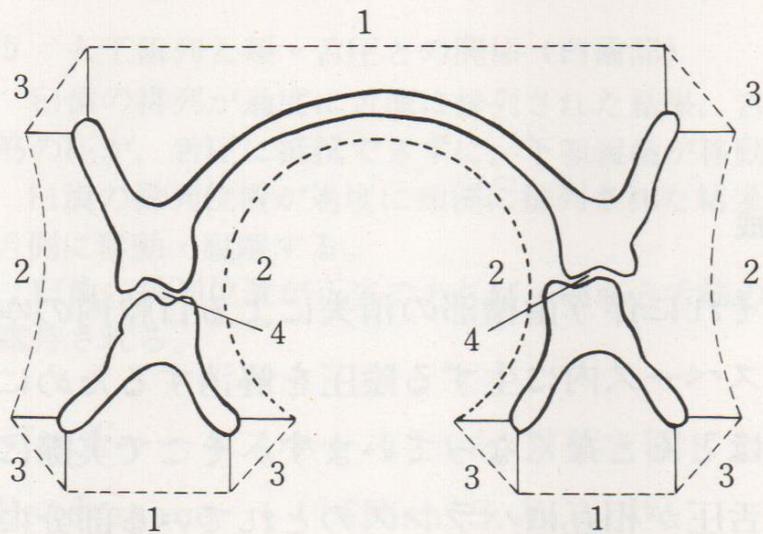
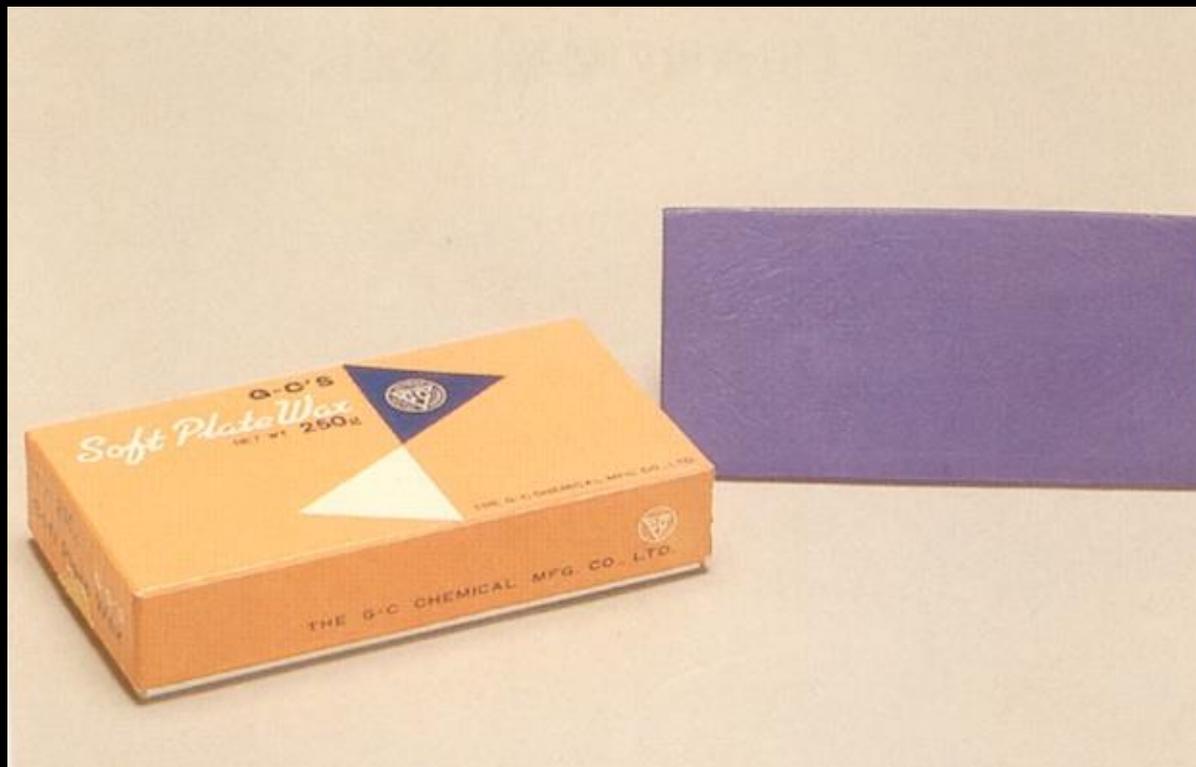
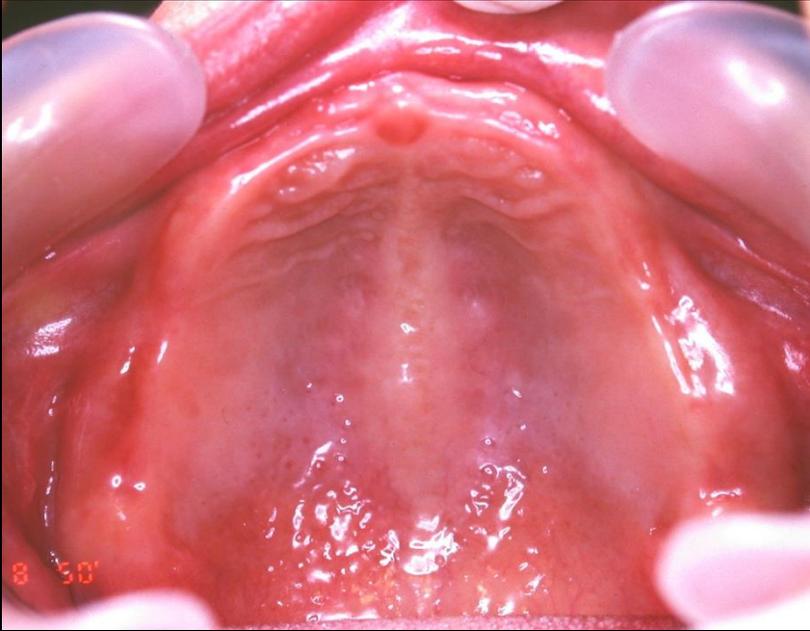


図1 義歯の構成

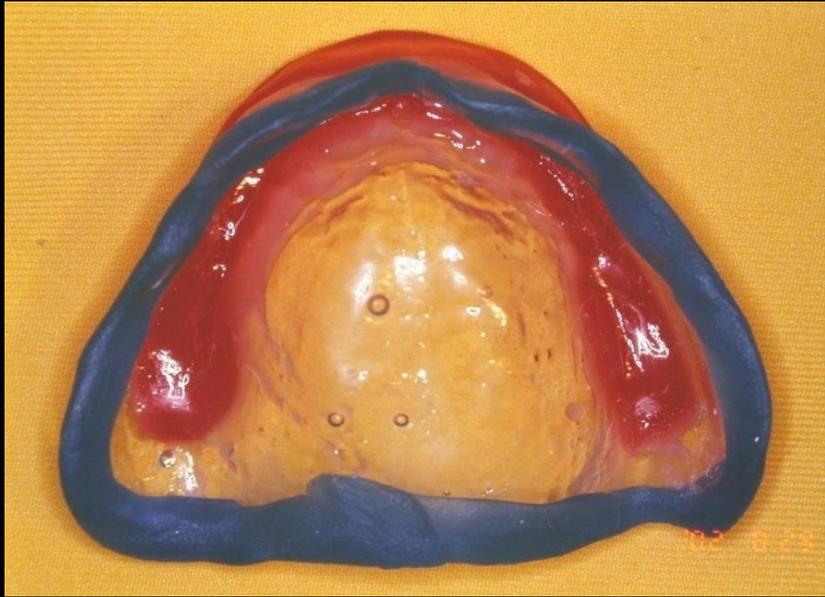
- |          |                              |
|----------|------------------------------|
| 1. 義歯印象面 | Impression surface           |
|          | Primary supporting surface   |
|          | Basal surface                |
| 2. 義歯研磨面 | Polished surface             |
|          | Secondary supporting surface |
| 3. 床辺縁部  | Denture border               |
| 4. 咬合面   | Occlusal surface             |
|          | Pressure receiving surface   |

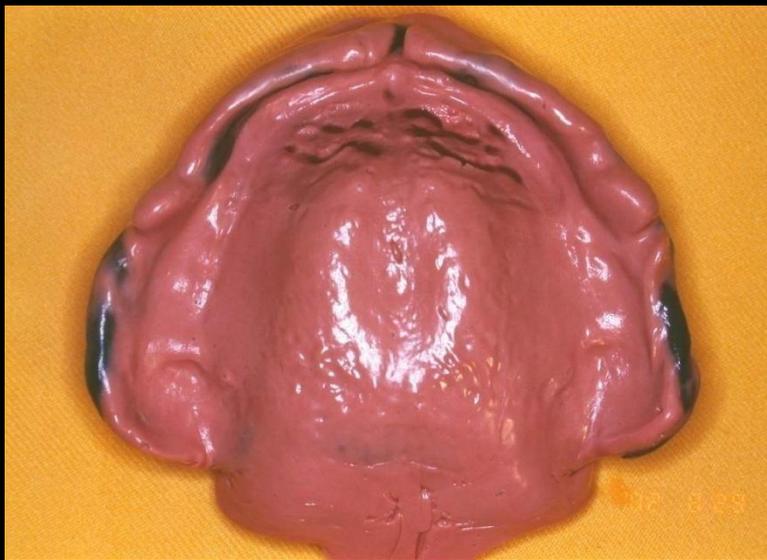
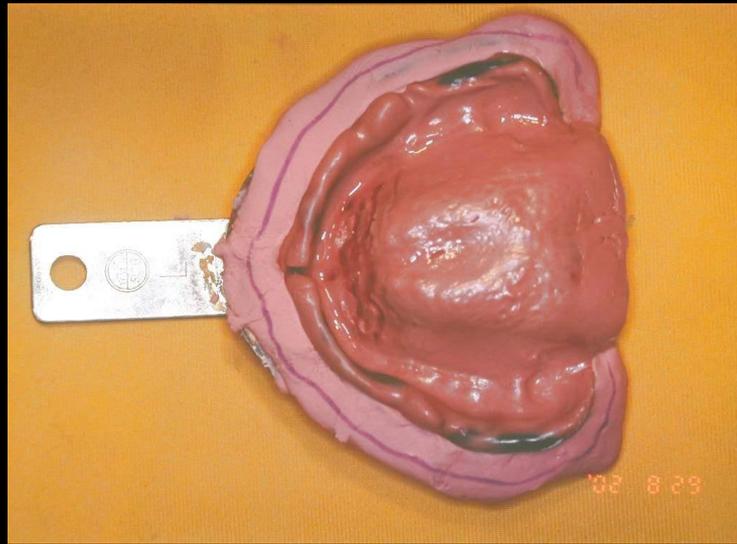
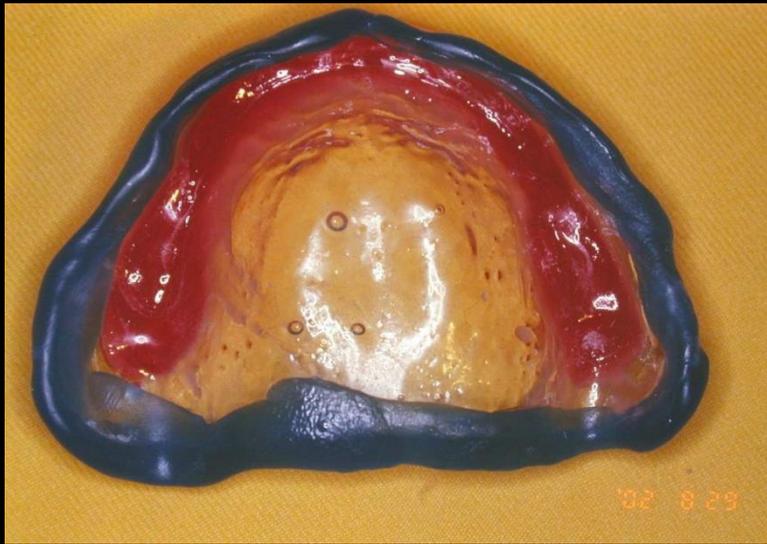


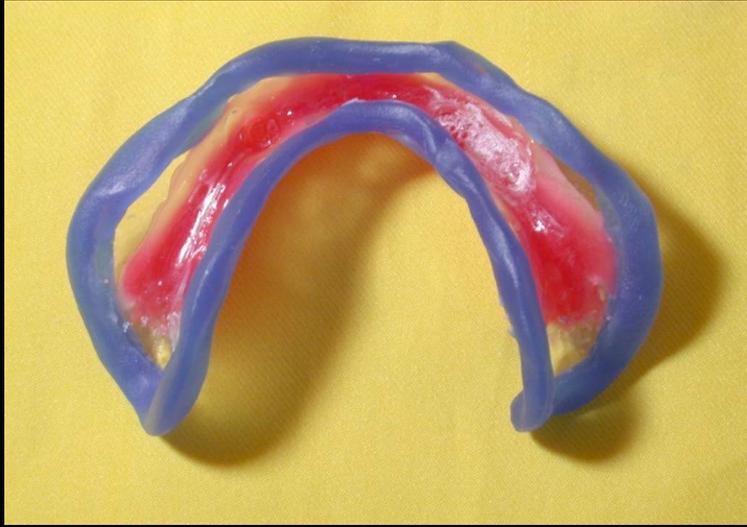


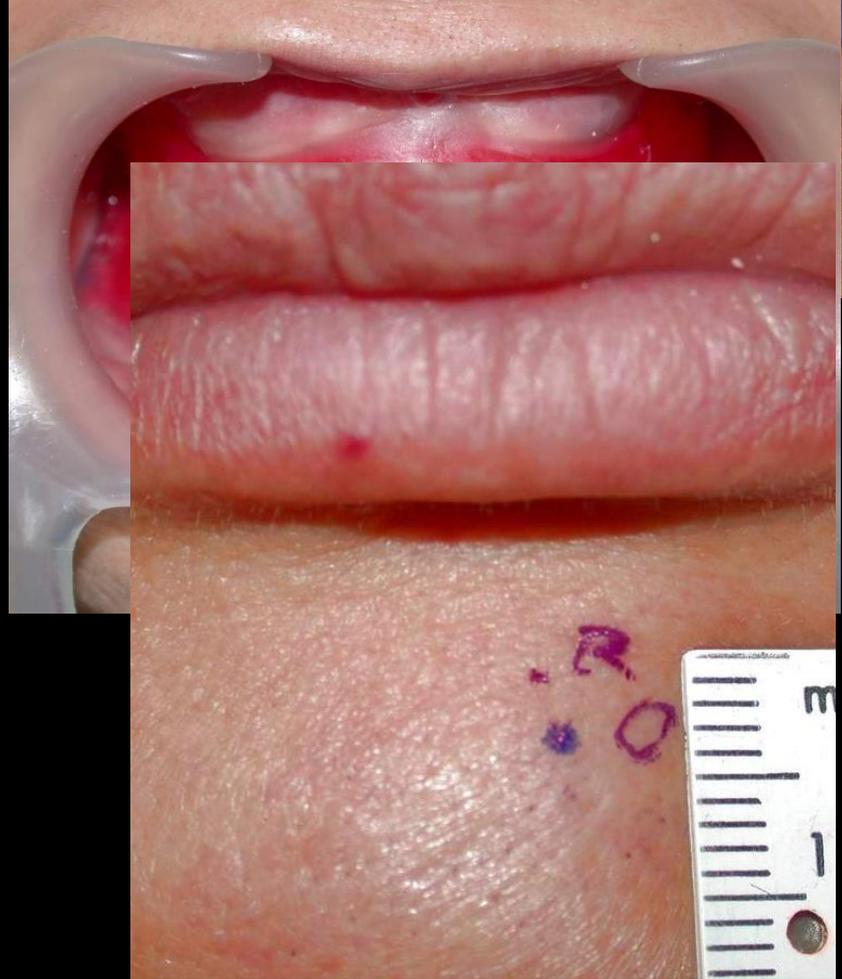


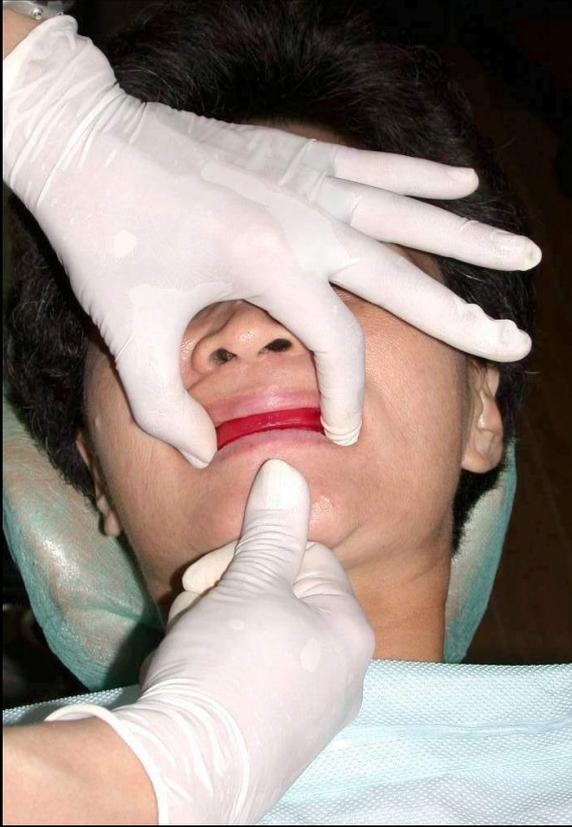




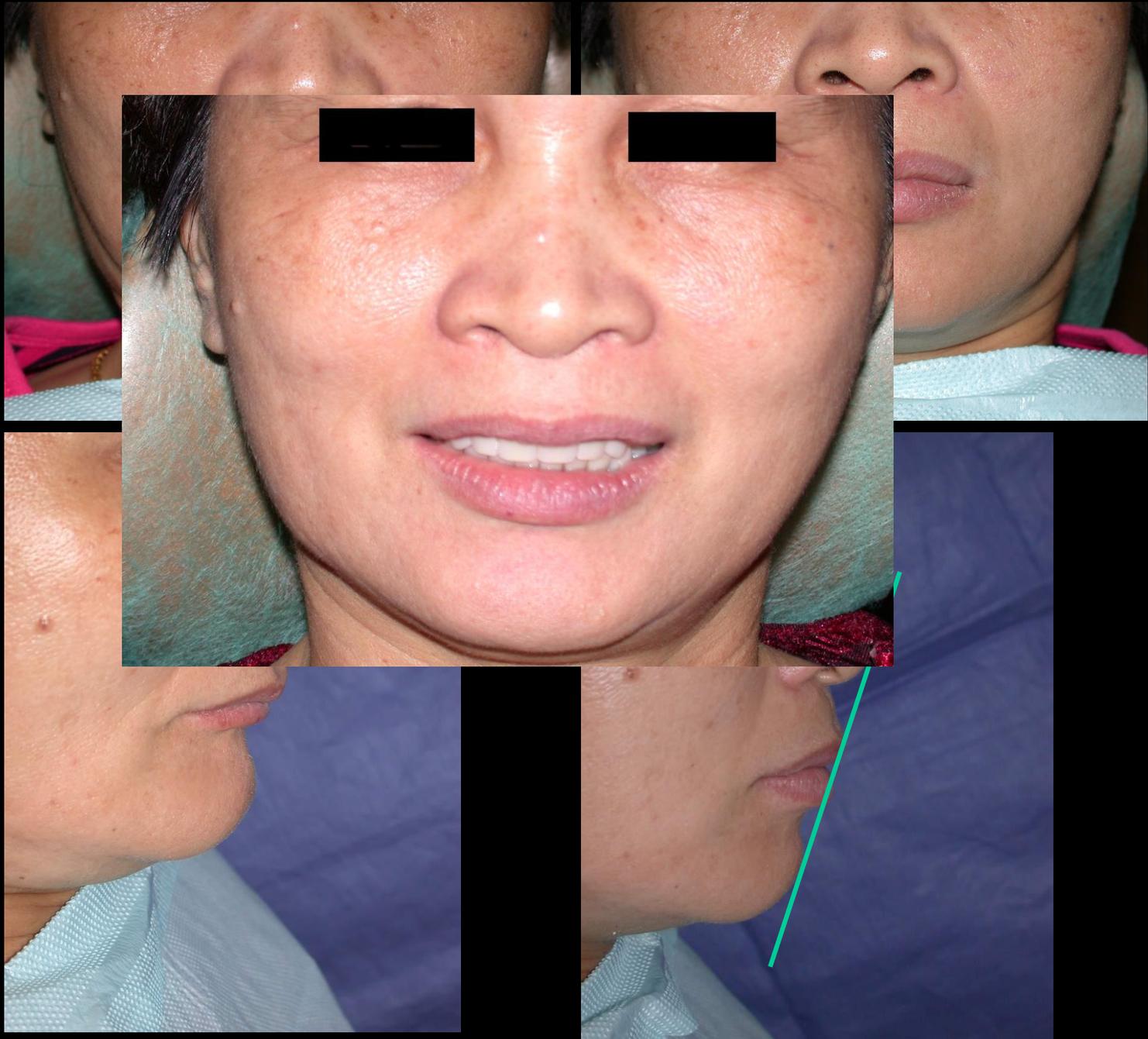


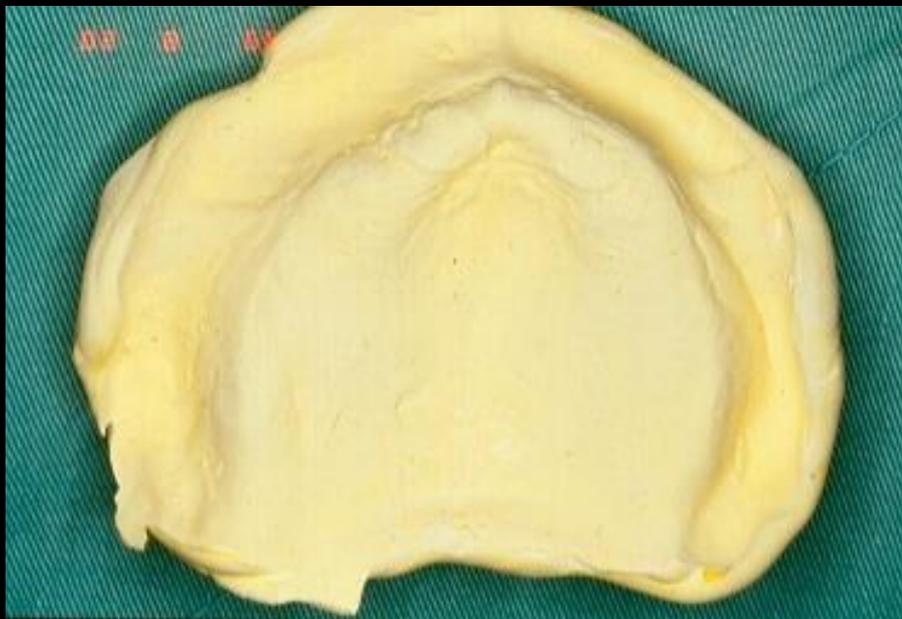
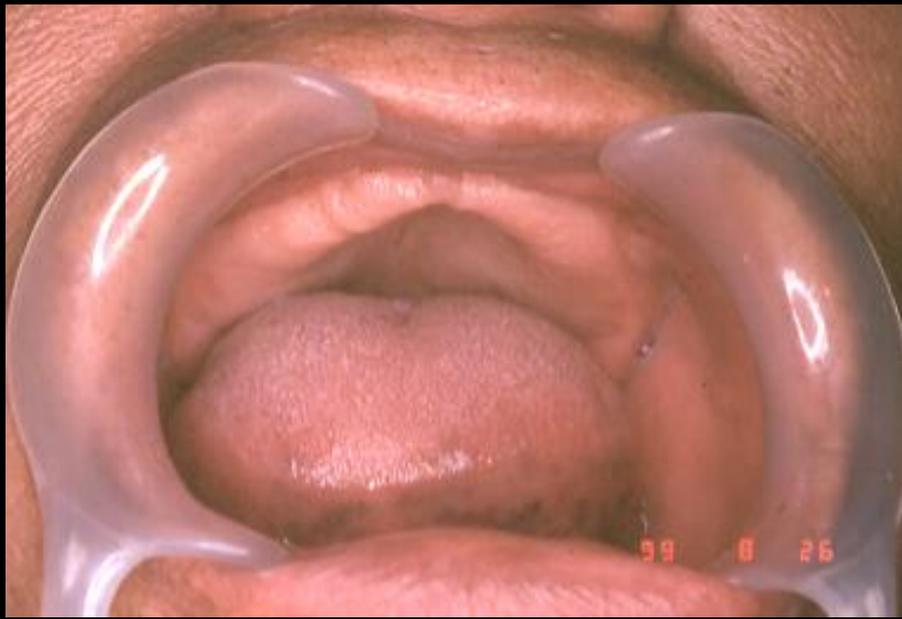




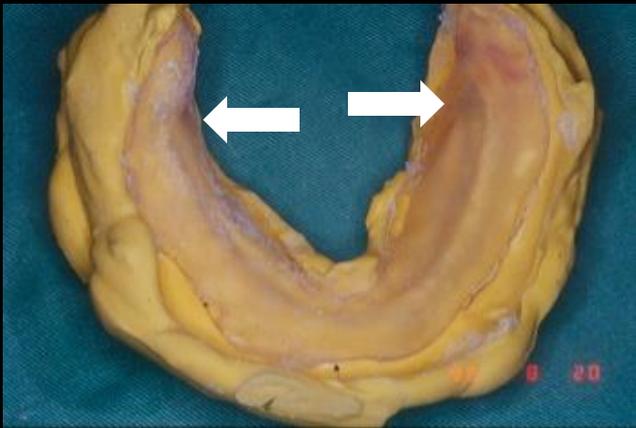


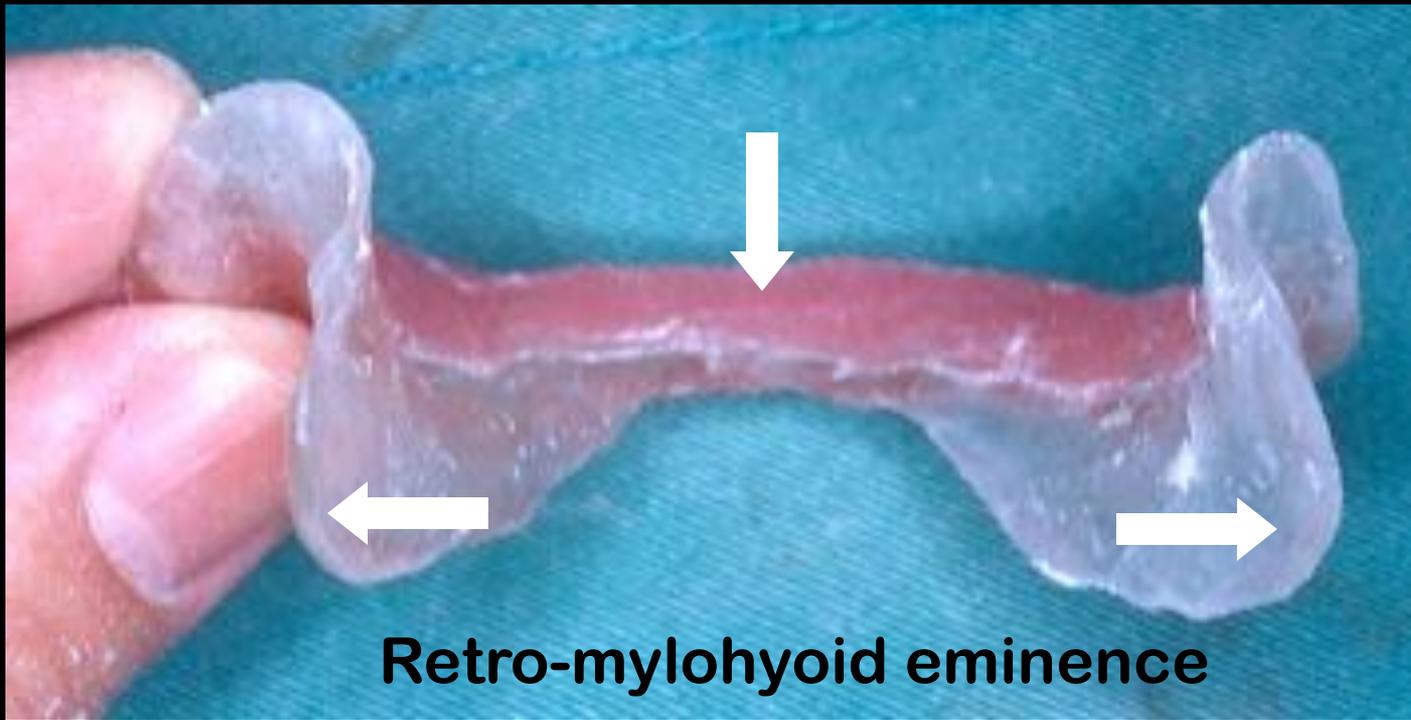






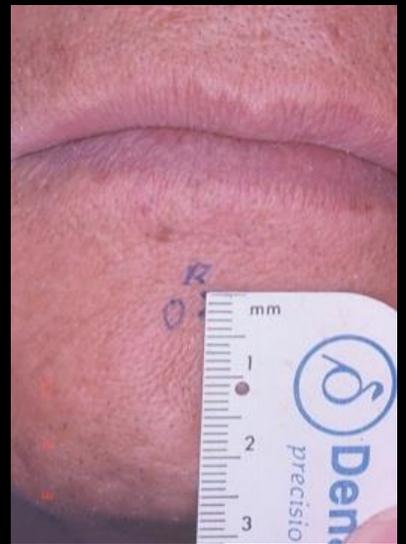
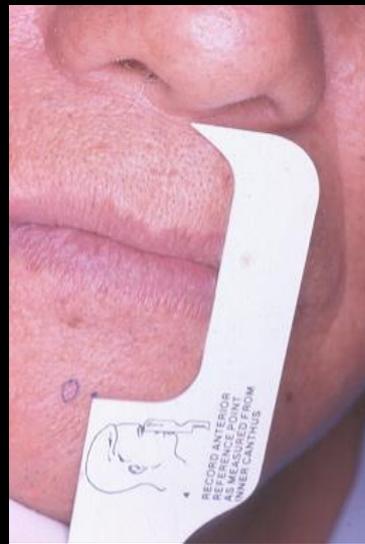


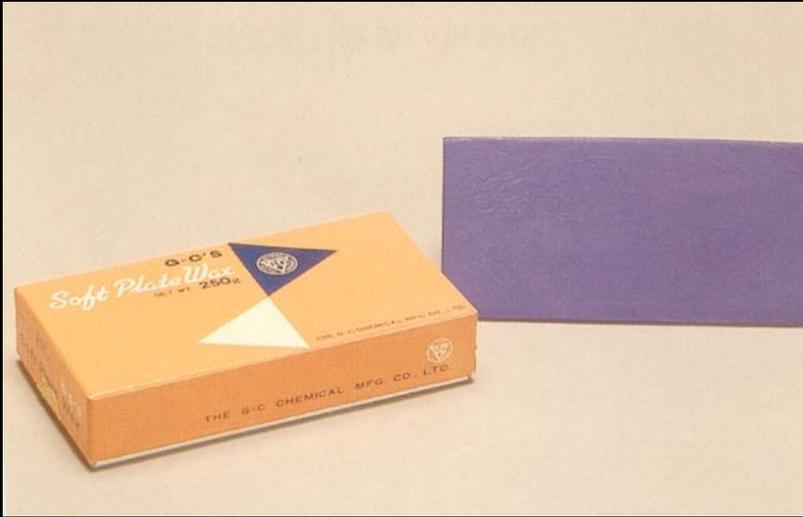
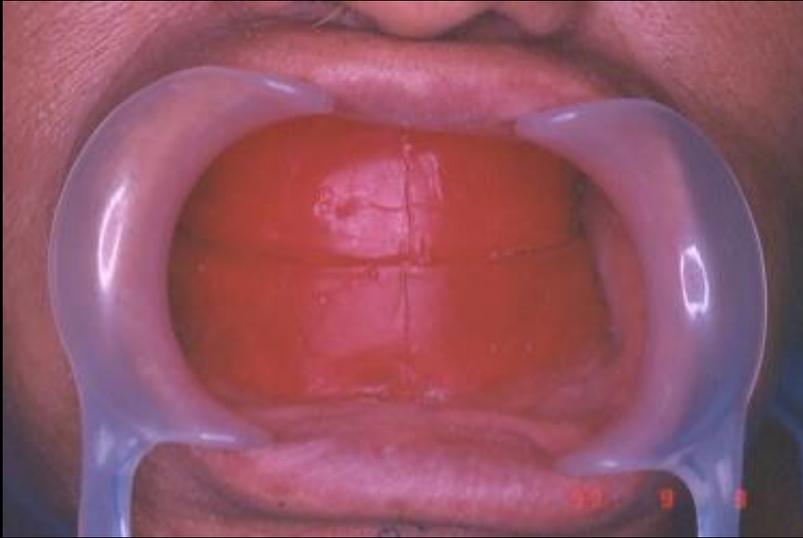




**Retro-mylohyoid eminence**





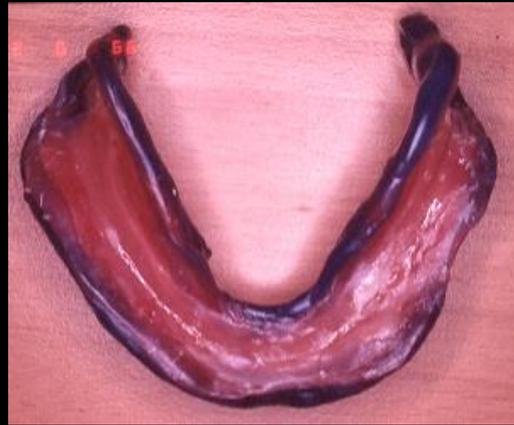




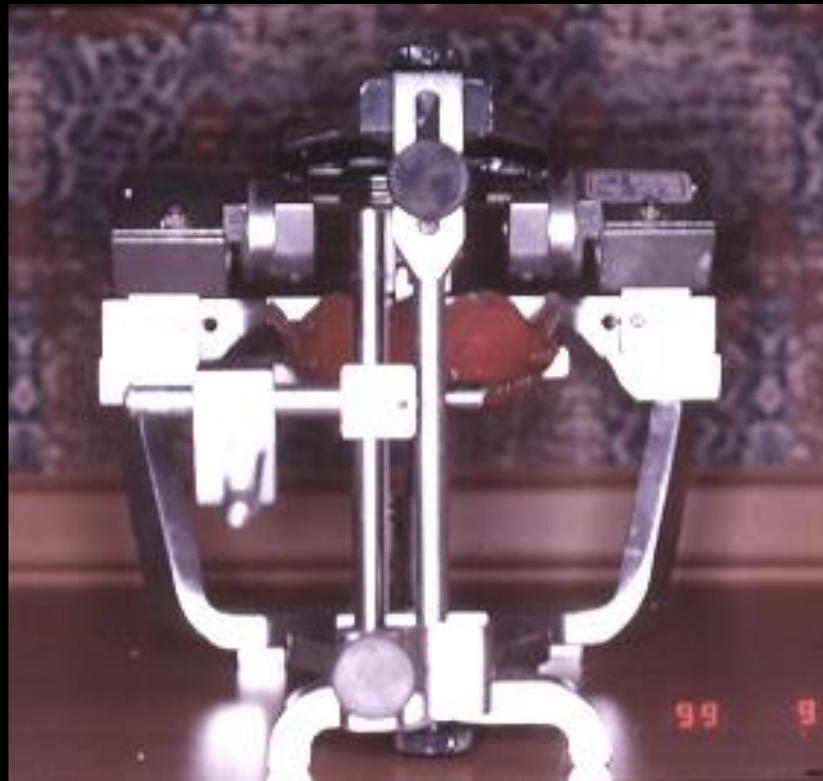
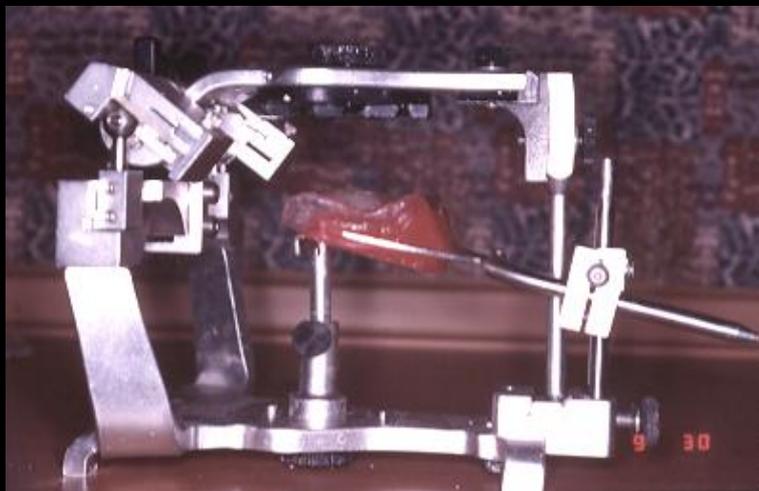
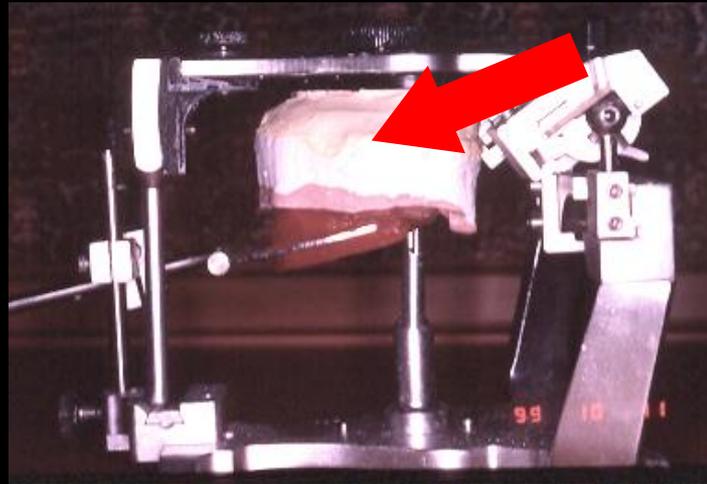
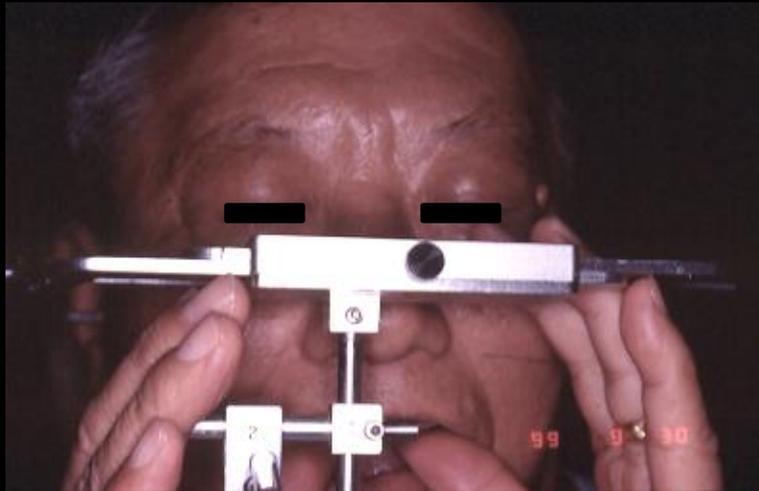


Alginate Boxing  
Darunee P. Nabadalung et al.  
JPD 1998;80(2): 262~264

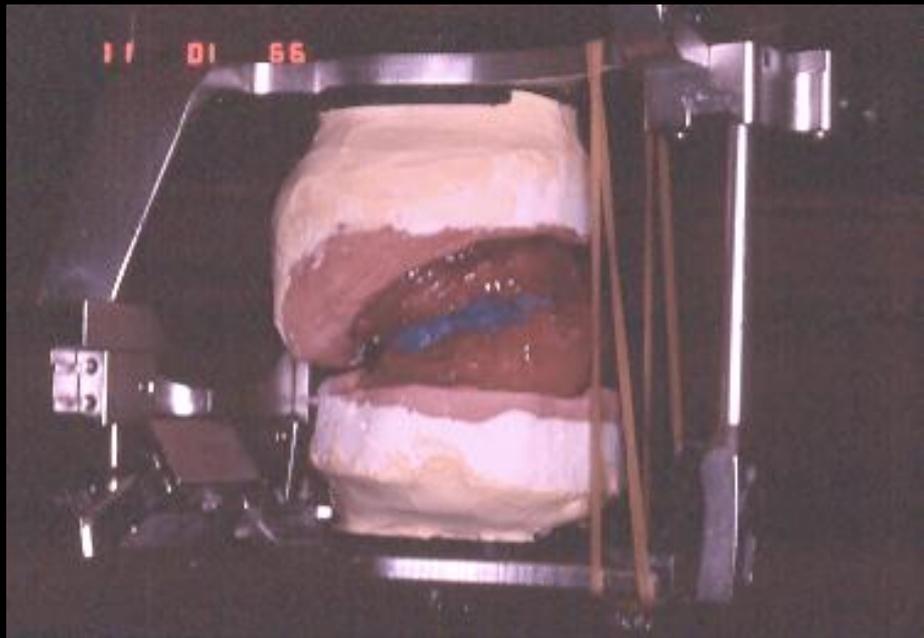




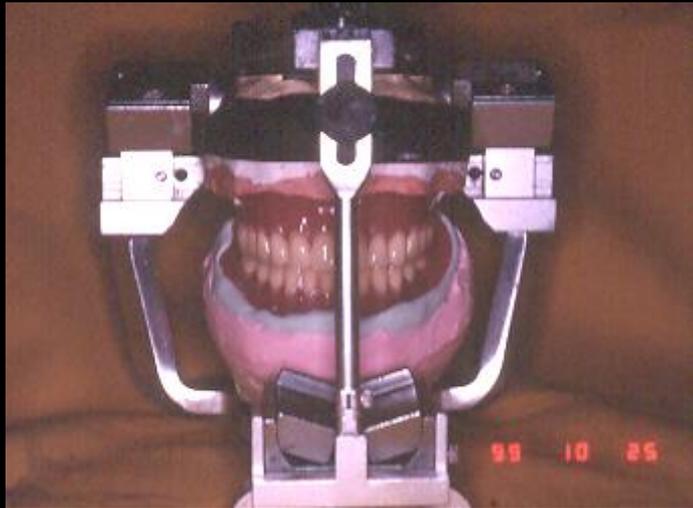






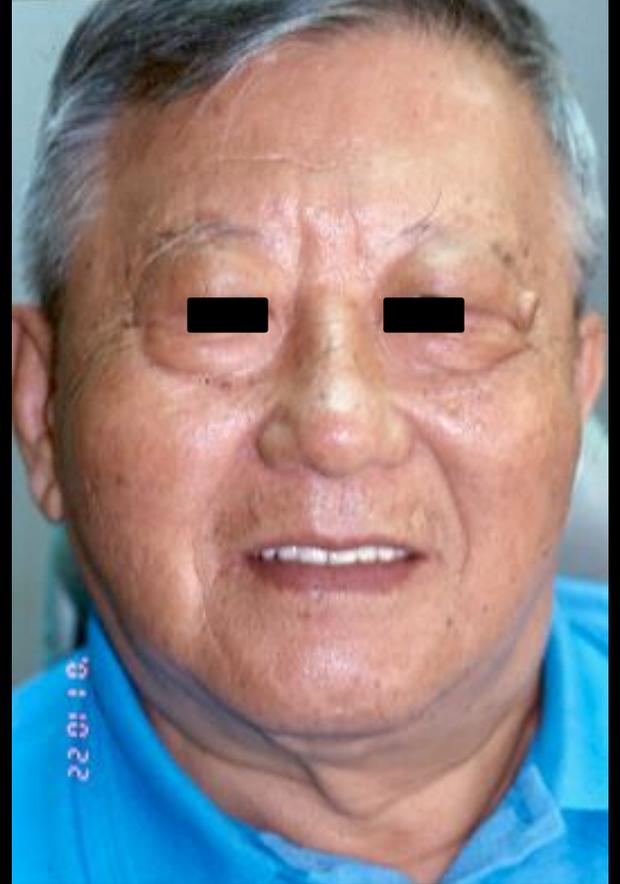
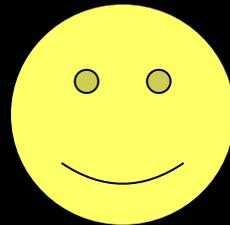








Happy smile!



Primary impression

Base plate + Wax rim (BW)



(BW)OP preliminary decision(Horizontal)  
VD preliminary decision(Vertical)



Soft plate Wax border molding(One step)



Final impression



Working casts fabrication

(BW)OP secondary decision(Horizontal)  
VD secondary final decision(Vertical)



Bite record



Face-bow transfer  
Working casts mounting



Artificial teeth arrangement



Trial denture OP/VD Esthetic final decision



Final denture delivery





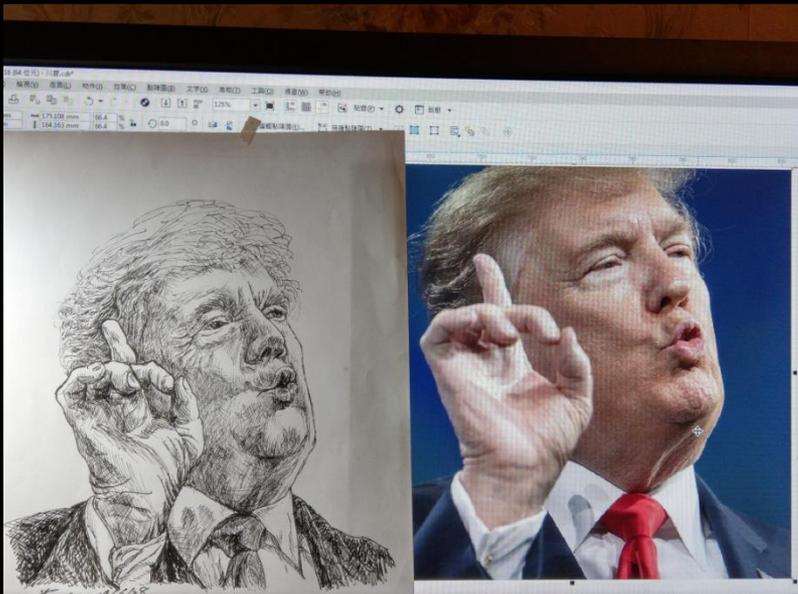


Y醫師，下一屆不送 Implant 的，我不會選他當市長



○  
我也好想！

同樣的！下一屆沒有鋼管舞的  
理事長我也不會選

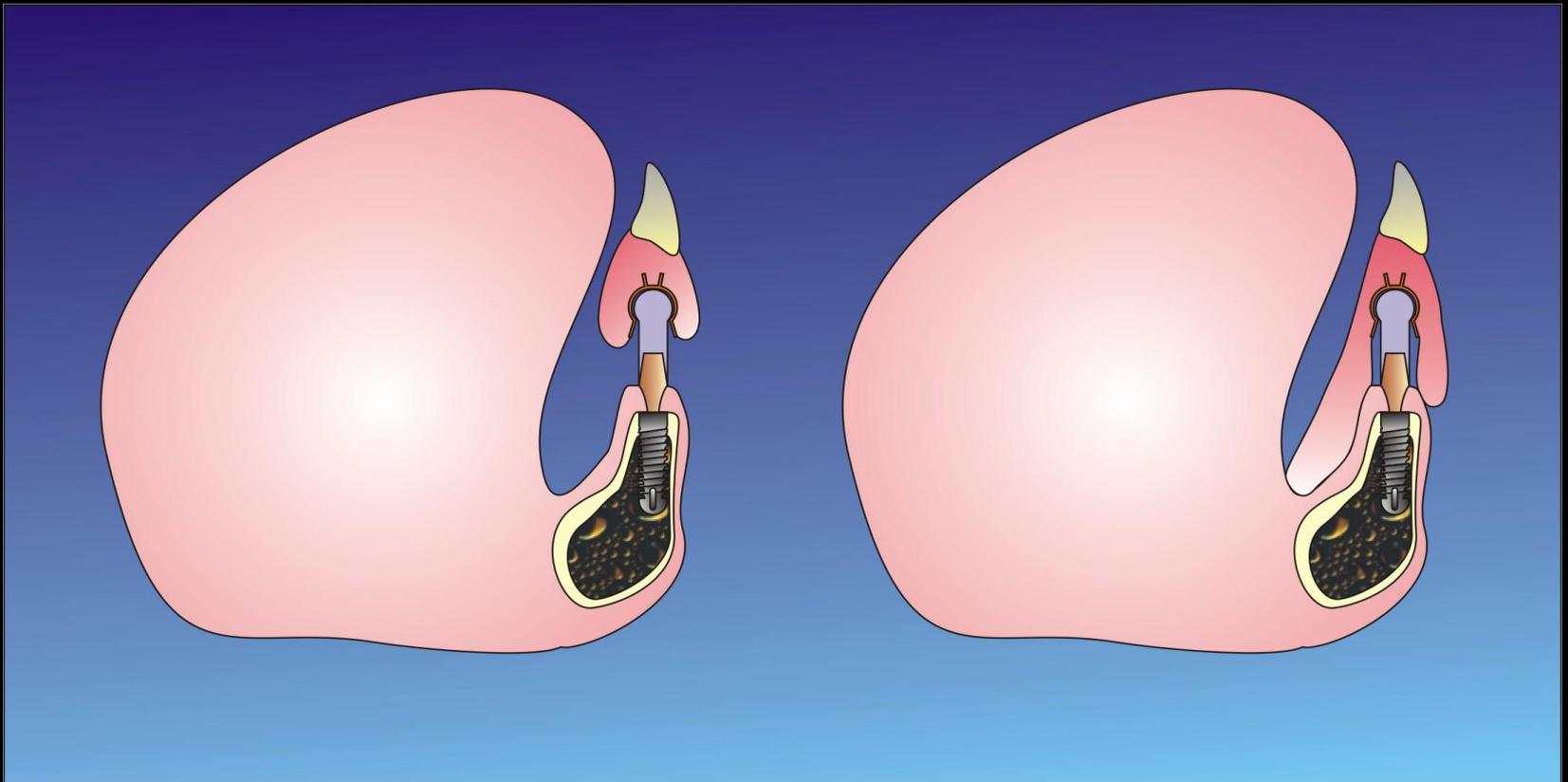


# Conclusion

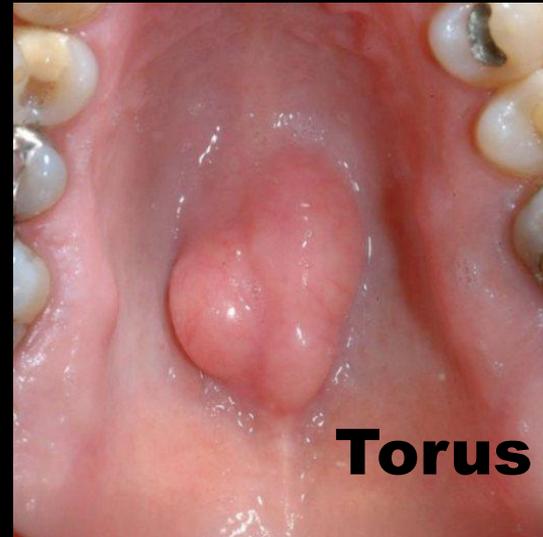
- Quick & effective.
- Retrievable.
- Relatively non-expensive.

# Respect to the soft tissue

- Support, retention, **Peripheral seal**

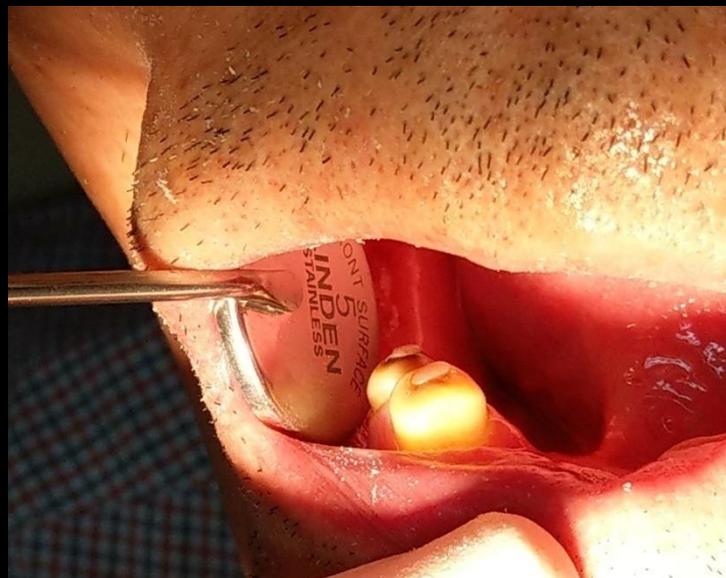
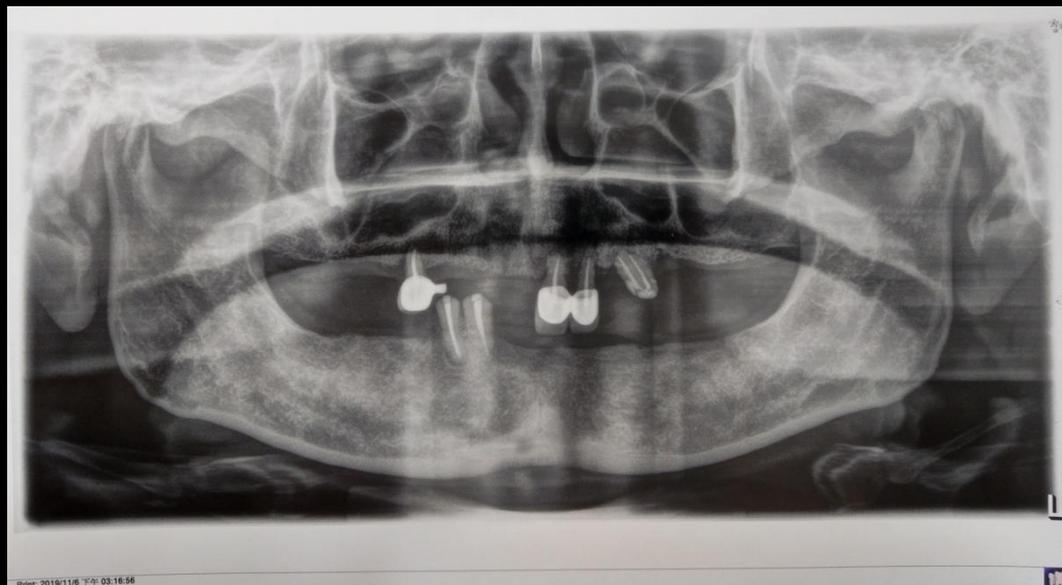


# 什麼地雷不要碰？



解剖型態不利者不接！

# 資訊不明者不接!



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謝謝您的參予



並  
祝君健康！

