

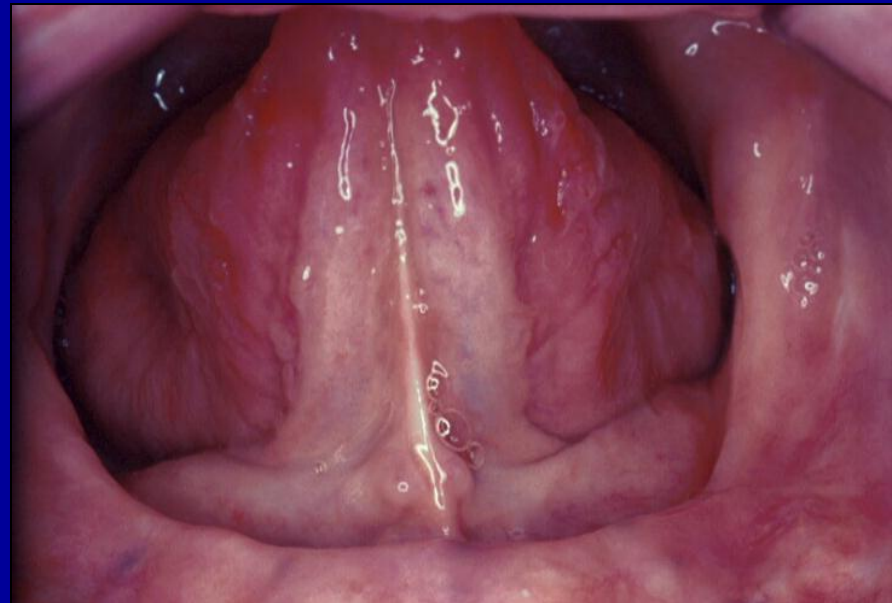
*Anatomical  
Landmarks Of upper  
Edentulous Arches*

*Dr. Enas Abdul-Sattar*

# Anatomical Landmarks Of Edentulous Arches



In order to properly construct a denture, one must understand the anatomy and physiology of the edentulous patient.



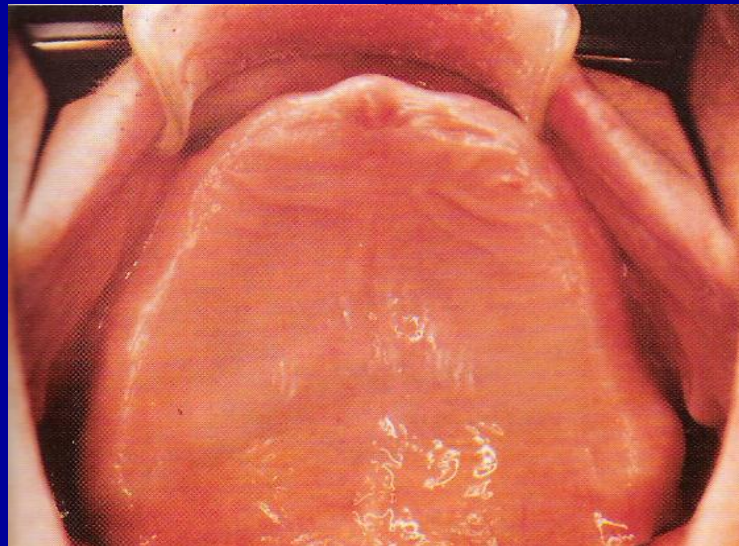
# Anatomical Landmarks Of Maxillary Arch

It comprises two areas:

- 1.supporting or stress-bearing area*
- 2.peripheral or limiting area*

## **A.The stress-bearing area :**

is composed of bone of the hard palate and residual ridge covered by mucous membrane (m.m) which serves as a cushion between the denture base and the supporting bone.

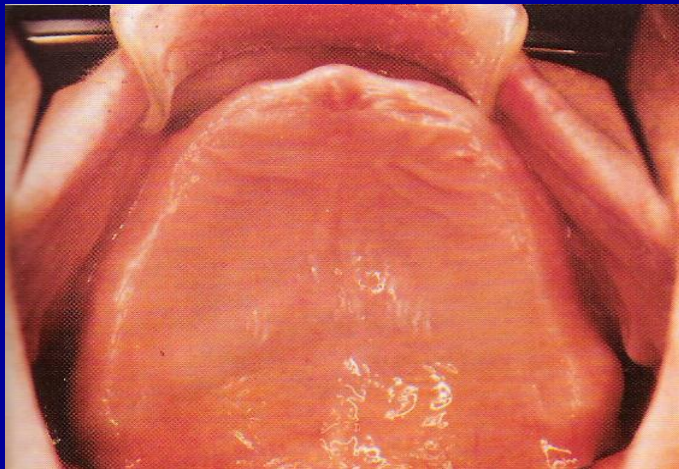


## 1. Residual alveolar ridge (R.R):

alveolar ridge and its soft tissue covering remains following the removal of teeth

It resorbs rapidly following extraction at first and continues throughout life at a reduced rate

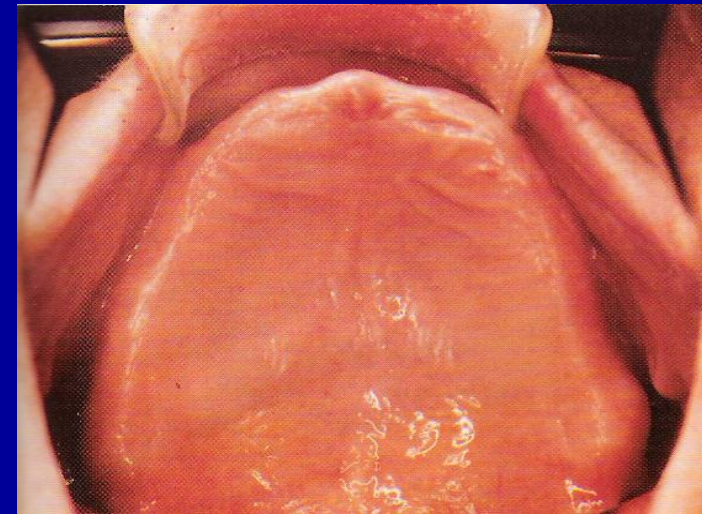
The crest of the R.R is regarded as a secondary stress bearing area



## 2.Hard palate:

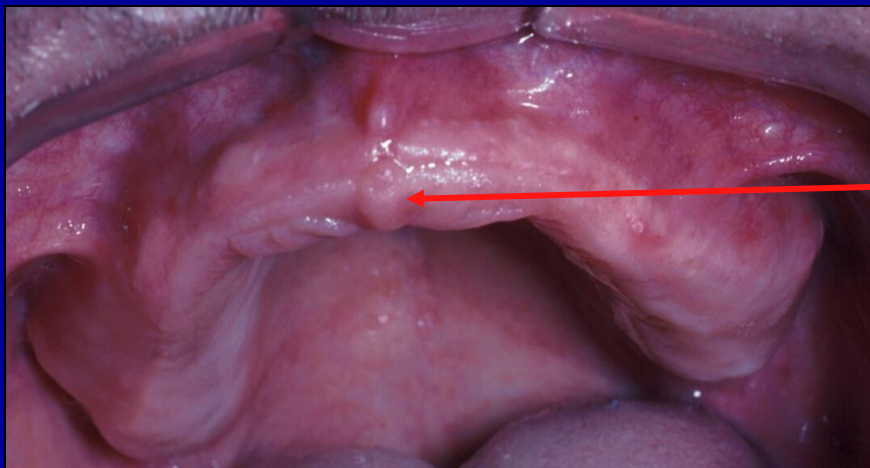
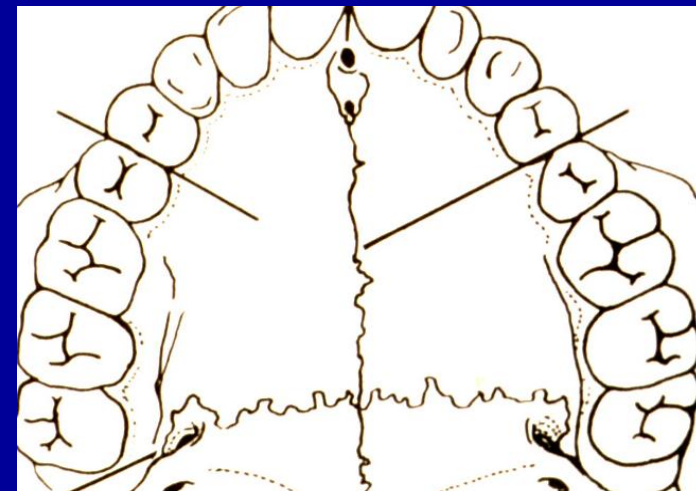
The ultimate support for a maxillary denture

Consists of the two maxillae and palatine bone, provides the primary stress bearing area for the denture.



### \*Incisive papillae:

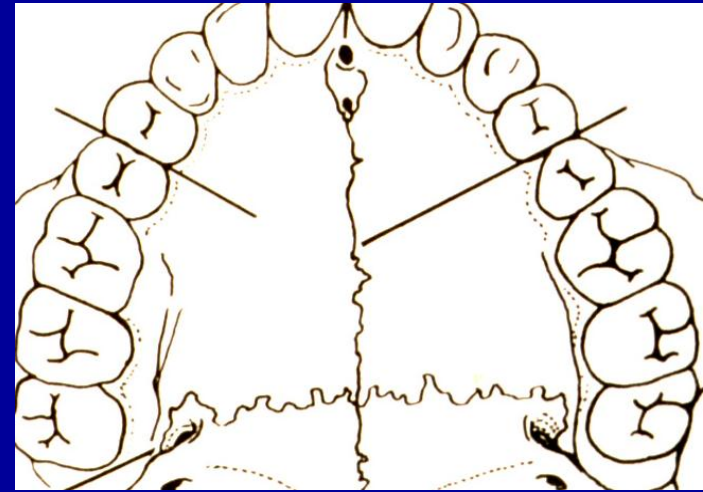
fibrous connective tissue overlying the orifice of the incisive foramen . nasopalatine nerves and blood vessels pass through



*Incisive papilla*

in the edentulous mouth it comes to lie nearer on or labial to R.R crest due to bone resorption.

**\* Midline palatal suture** : extends from the incisive papilla to the distal end of the hard palate.

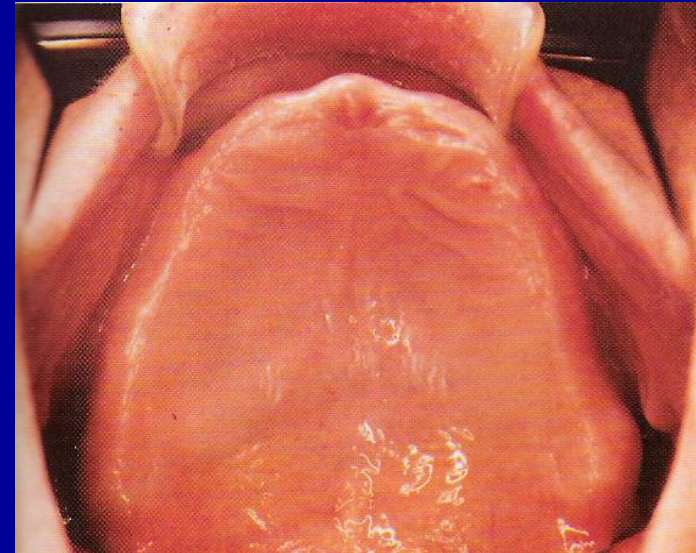


**\* Median palatine raphe** :

It is the mucosa overlies median palatine suture the underlying bone union being very dense and often raised so it should be relieved during denture fabrication.

**\* Rugae area:**

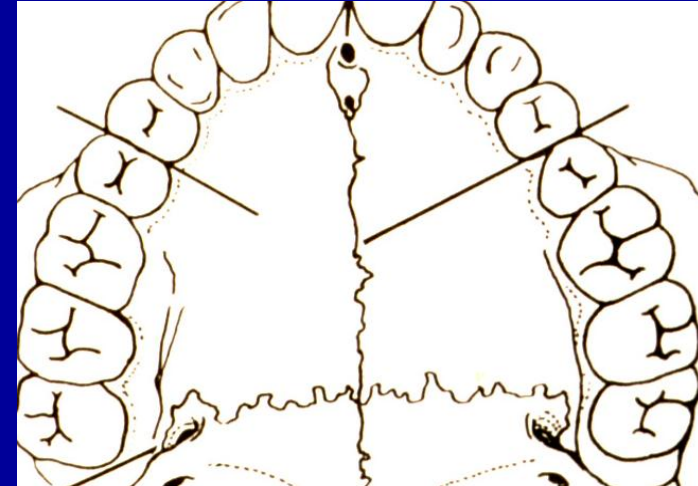
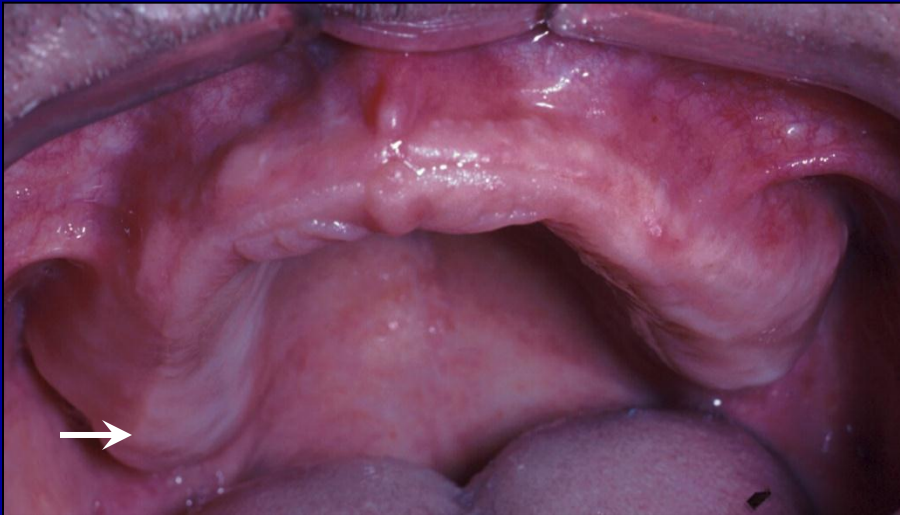
is a raised area of dense connective tissue radiating from the median palatine suture in the anterior 1/3 of the palate.



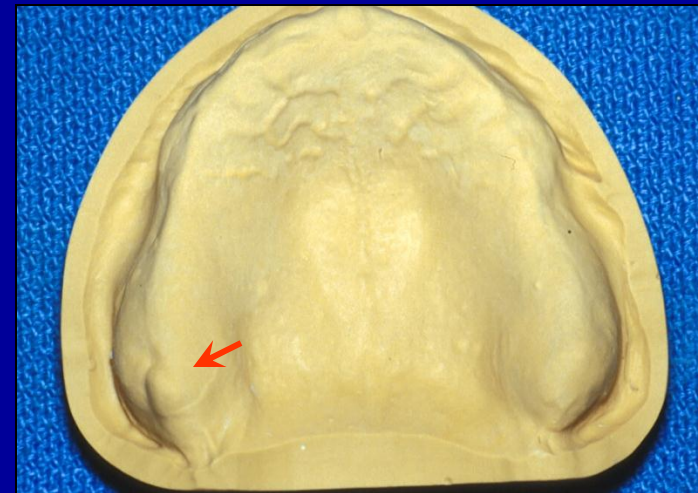
# Anatomical features that influence the shape of the supporting structures:

1. Incisive foramen:

2. Maxillary tuberosity (alveolar tubercle):

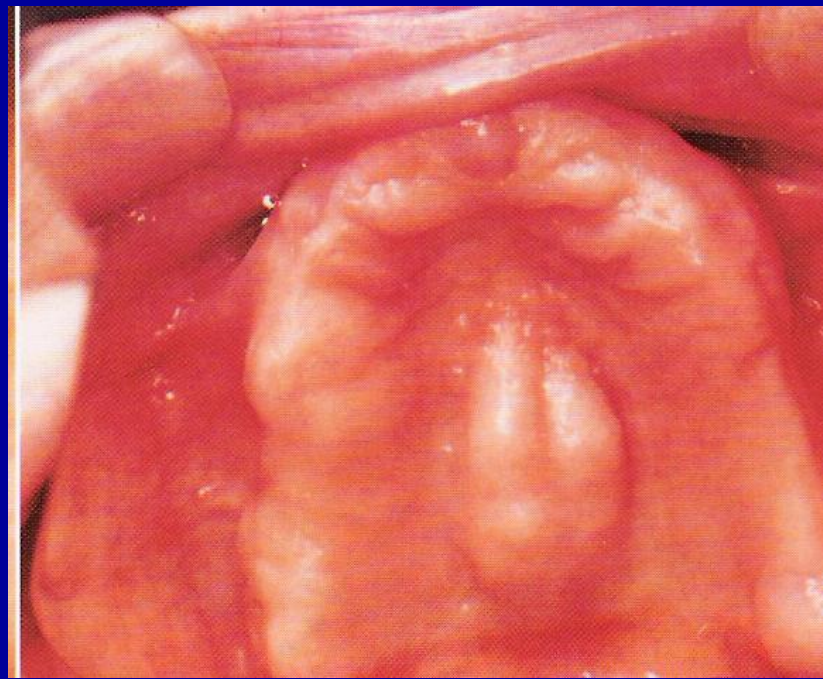


it is the distal end area of the R.R ,  
extends from the 2<sup>nd</sup> molar  
area to the hamular notch .



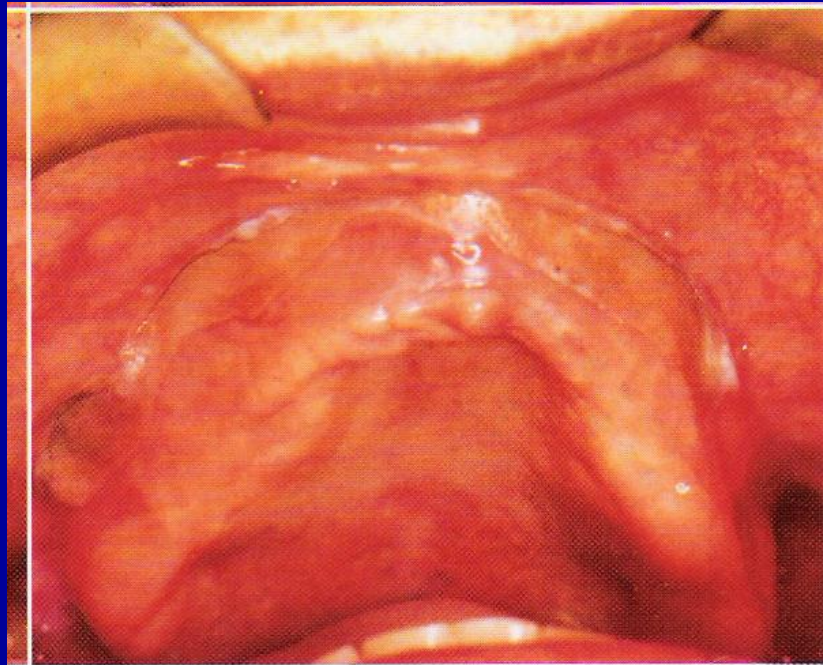
### **3. Torous palatinus:**

is a hard bony enlargement occurs in median palatine suture area found in about 20% of the population.

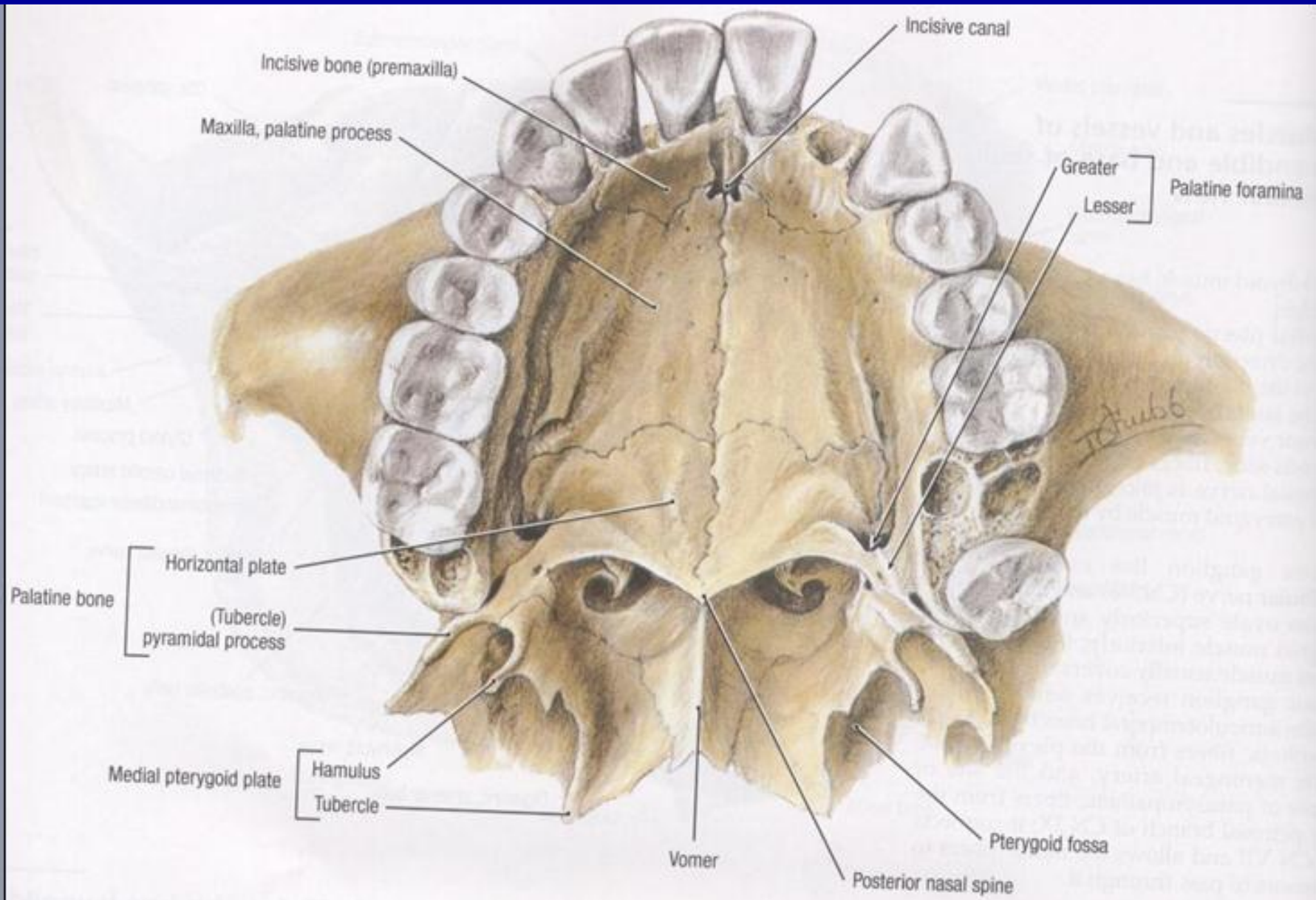


### **4. Sharp spiny processes:**

which may occur on maxillary and palatine bones, they cause no problem when covered deeply by soft tissue







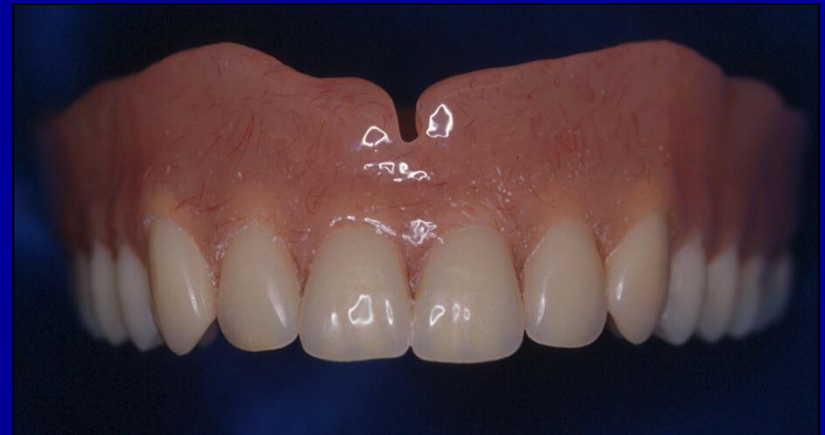
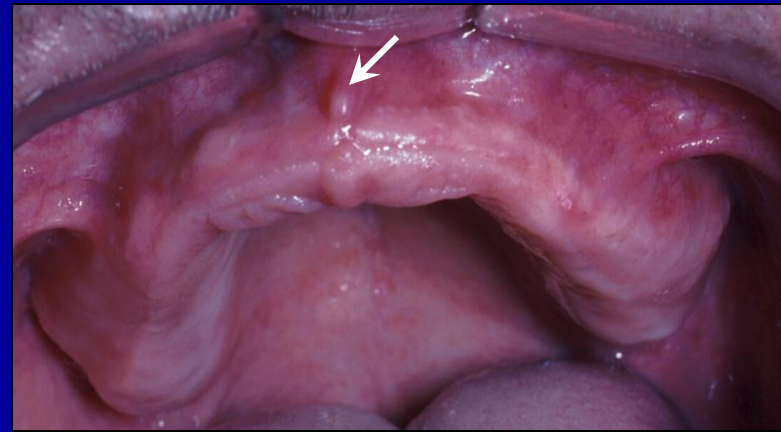
## B. The Peripheral or limiting area

**1. Labial frenum:** is a fold of m.m at the median line extends from upper lip m.m toward the labial surface of R.R crest.

**2. Buccal frenum :** is a fold or folds of m.m extends from buccal m.m reflection area toward R.R crest,

**NOTE:** on the denture the area that is opposite to labial or buccal frenum is known as a notch

buccal frenum movement is effected by buccinator and orbicularis muscles

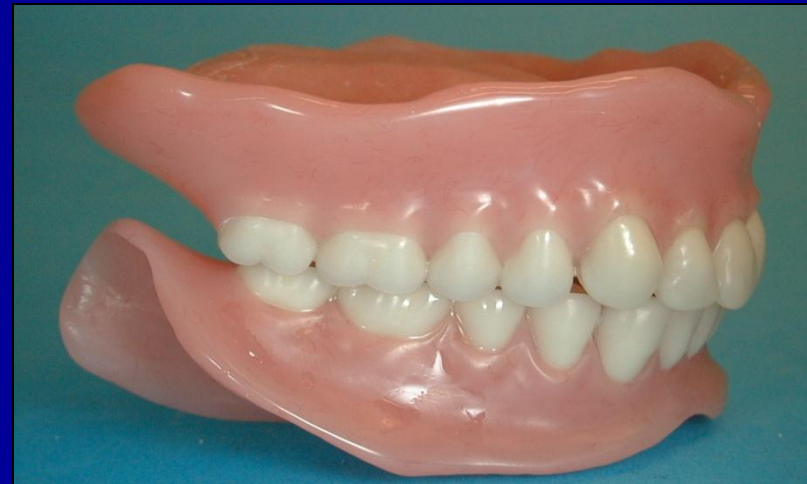


**3. Labial vestibule:** a space lined by a thin m.m, extends on both sides of the arch from the labial frenum to buccal frenum

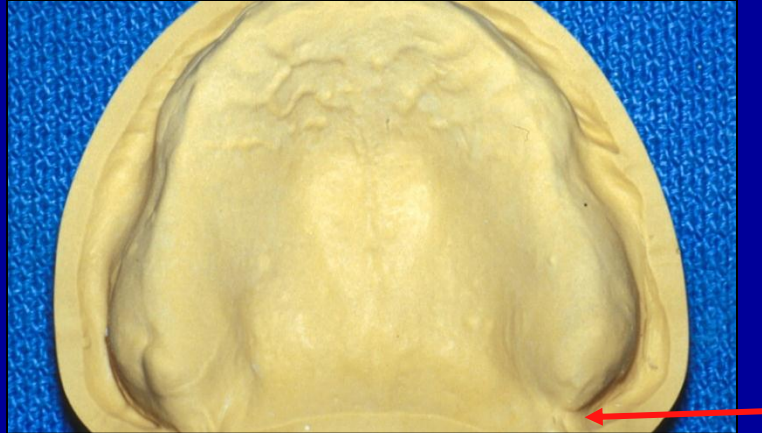


**4. Buccal vestibule:** is a space lined by a thin m.m, extends from the buccal frenum to the hamular notch on both sides of the arch .

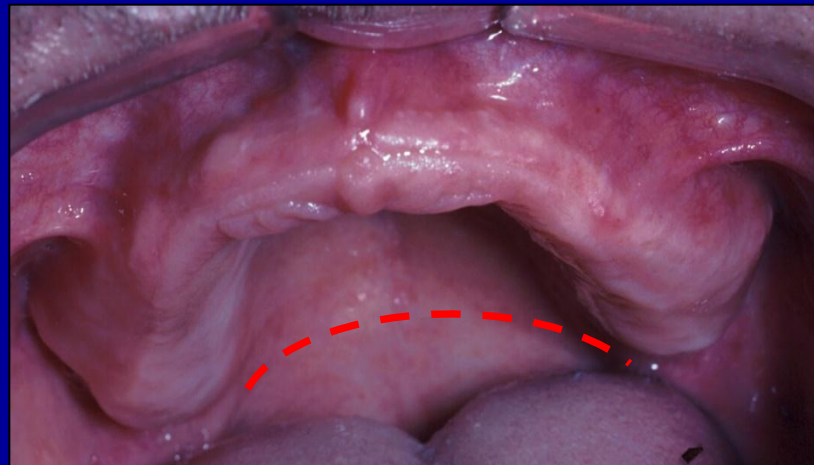
**NOTE:** the area of the denture that fill the vestibular space is called labial or buccal flange



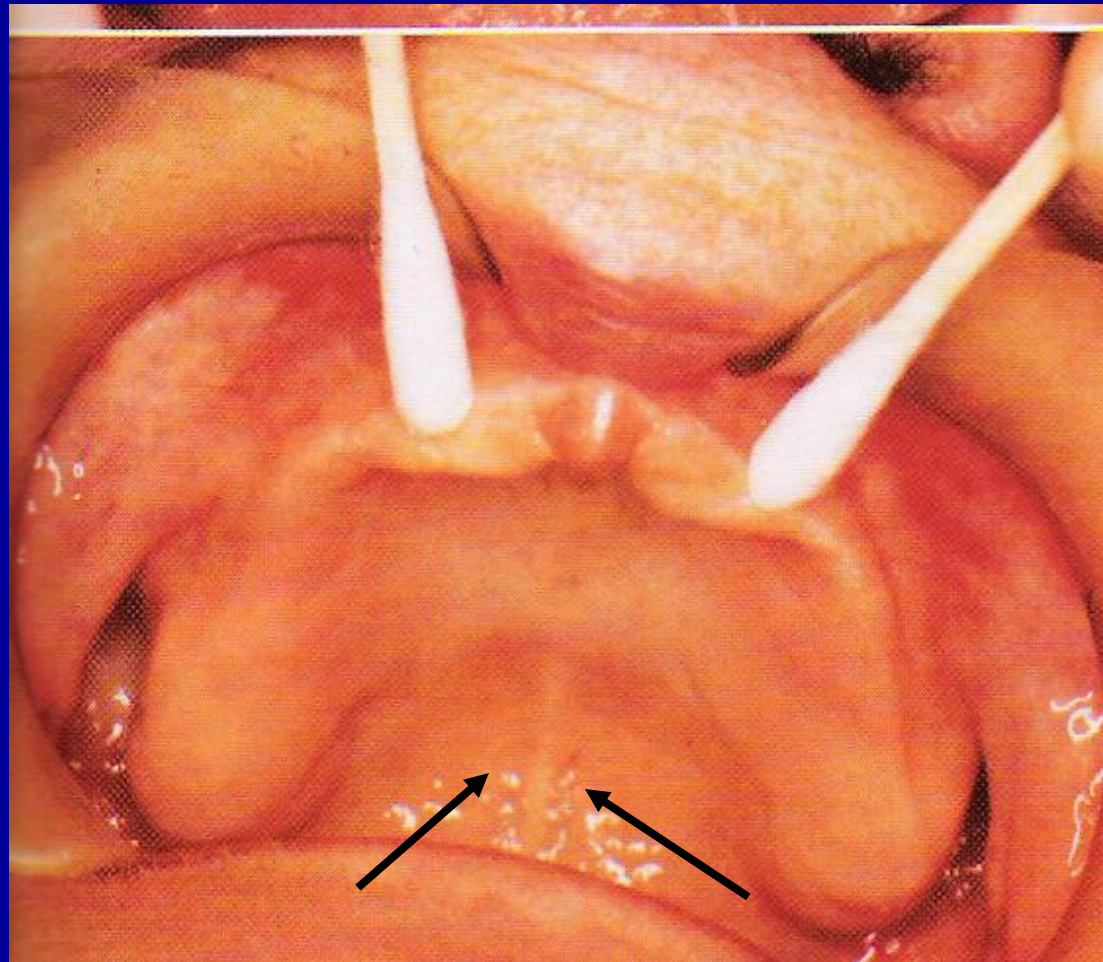
5. Hamular notch (pterygo-maxillary notch): it is a depression situated between the maxillary tuberosity and the hamulus of medial pterygoid plate. The denture border should extend till the hamular notch.



6. Vibrating line: it is an imaginary line drawn across the palate extends from one hamular notch to the other at the junction between movable and immovable parts of the soft palate

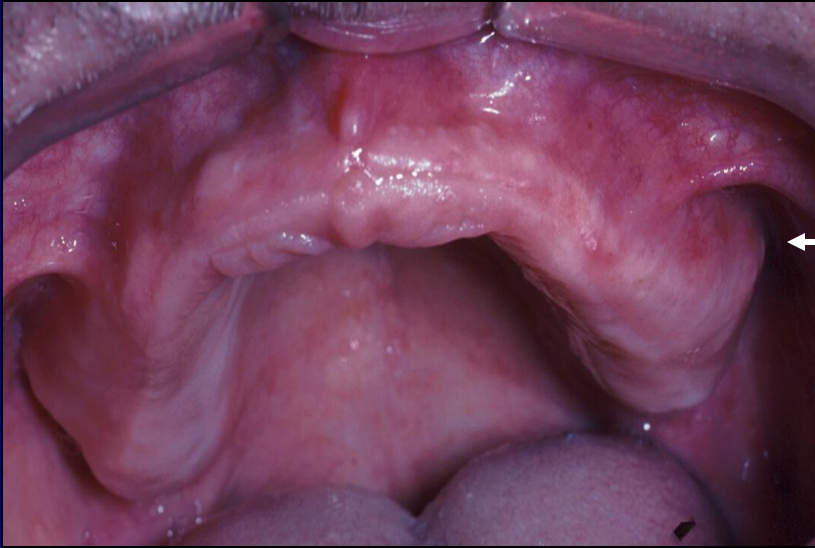


**7. Foveae palatinae:** two small pits or depressions in the posterior aspect of the palate, one on each side of the midline, which formed by mucous gland ducts.

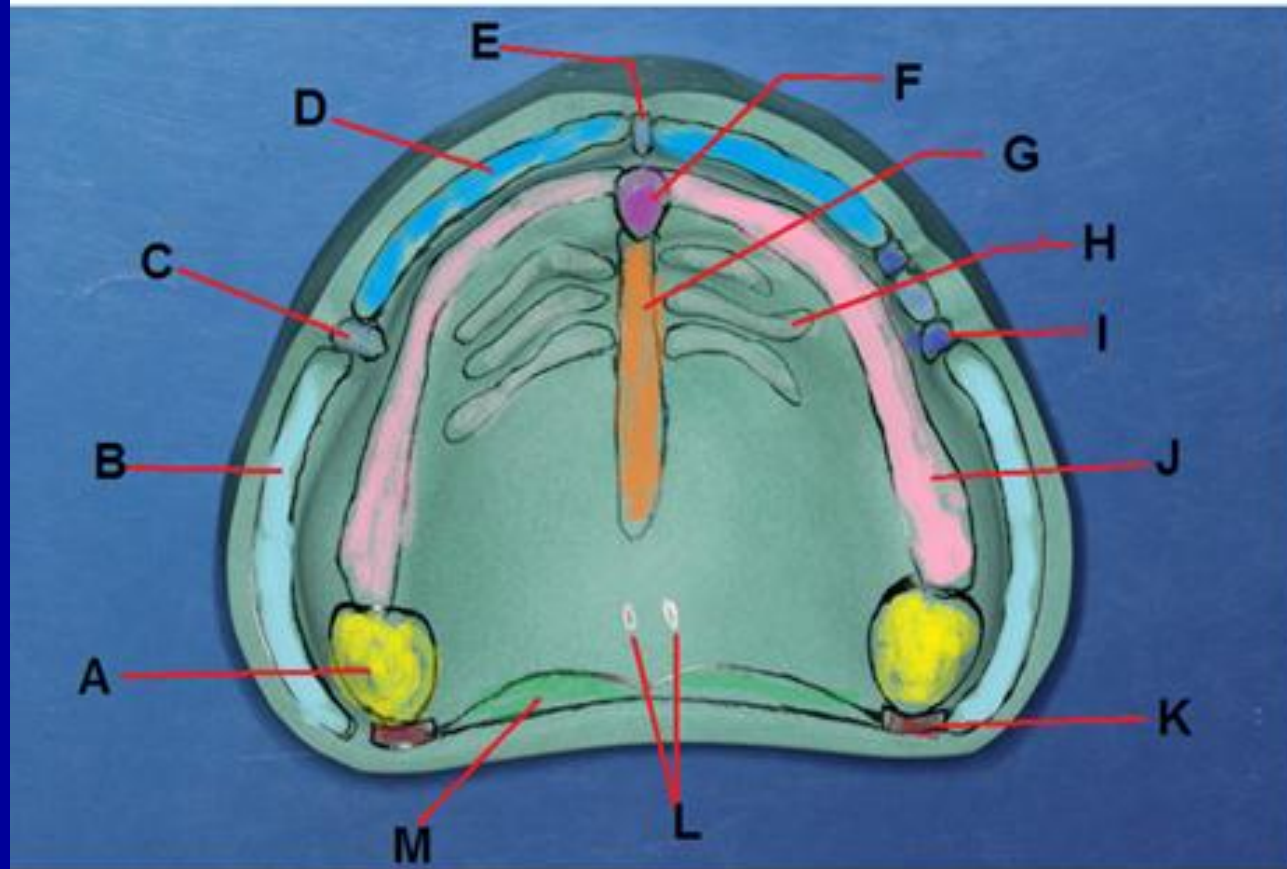


## 8. Zygomatic process:

is located distal to buccal frenum opposite the first molar region .



## Anatomical landmarks of edentulous maxilla



A- maxillary tuberosity  
B- Buccal Sulcus  
C,I- Buccal frenum  
D- Labial Sulcus  
E- labial Frenum  
F- Incisive papilla  
G- Mid palatine raphae

H- Palatal rugae  
J- Crest of the alveolar ridge  
K- Hamular notch  
L- Fovea platina  
M- posterior Palatal seal

**THANK YOU**

THANK YOU