

# University of Basrah

## College of Dentistry

### Department of prosthetic dentistry

5<sup>th</sup> stage / lec 1 (continue)

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## 1. Classification System for Complete Edentulism

### *Integration of Diagnostic Findings*

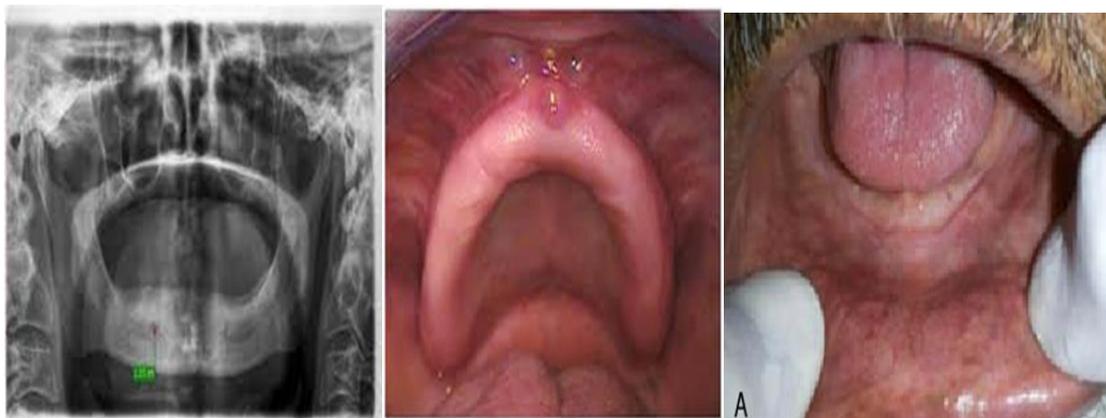
The aforementioned four sub-classifications play a crucial role in the comprehensive diagnostic classification of full edentulism. Furthermore, it should be noted that factors that are likely to have an impact on the complexity of therapy are allocated across all categories based on their level of importance.

## 2. Diagnostic Classification of Complete Edentulism

### *Class I*

This classification level characterizes the stage of edentulism that most appear to be successfully treated with complete dentures using conventional prosthodontics techniques. All four of the diagnostic criteria are favorable.

- Residual bone height of 21 mm or greater is measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology resists horizontal and vertical movement of the denture base; Type A maxilla.
- Location of muscle attachments that are conducive to denture base stability and retention; Type A or B mandible.
- Class I maxillomandibular relationship



### **3. Class II (Fig 15 A-H)**

This classification level distinguishes itself by the continued physical degradation of the denture-supporting anatomy, and, in addition, is characterized by the early onset of systemic disease interactions,

patient management, and/or lifestyle considerations.

- Residual bone height of 16 to 20 mm measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology that resists horizontal and vertical movement of the denture base; Type A or B maxilla.
- Location of muscle attachments with limited influence on denture base stability and retention; Type A or B mandible.
- Class I maxillomandibular relationship.
- Minor modifiers, psychosocial considerations, mild systemic disease with oral manifestation.



### **4. Class III**

This classification level is characterized by the need for surgical revision of supporting structures to allow for adequate prosthodontic function. Additional factors now play a significant role in treatment outcomes.

- Residual alveolar bone height of 11 to 15 mm measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge morphology has minimum influence to resist horizontal or vertical movement of the denture base;

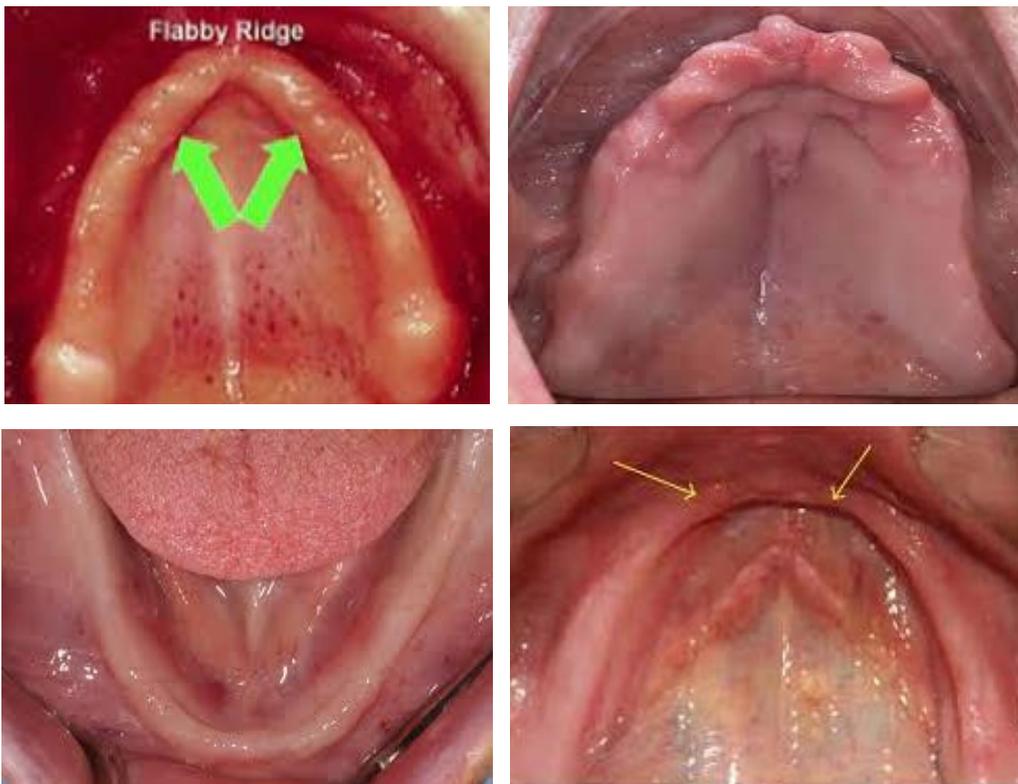
Type C maxilla.

- Location of muscle attachments with moderate influence on denture base stability and retention; Type C mandible.
- Class I, II, or III maxillomandibular relationship.

➤ Conditions requiring pre-prosthetic surgery:

- 1) minor soft tissue procedures;
- 2) minor hard tissue procedures including valvulotomy.
- 3) simple implant placement, no augmentation
- 4) multiple extractions leading to complete edentulism for immediate denture placement.

- Limited interarch space (18-20 mm).
- Moderate psychosocial consideration and or moderate oral manifestations of systemic diseases or conditions such as xerostomia
- TMD symptoms present.
- Large tongue (occludes interdental space) with or without hyperactivity.
- Hyperactive gag reflex.



## 5. *Class IV*

This classification level depicts the most debilitated edentulous condition. Surgical reconstruction is almost always indicated but cannot always be accomplished because of the patient's health, preferences, dental history, and financial considerations. When surgical revision is not an option, prosthodontics techniques of a specialized nature must be used to achieve an adequate treatment outcome.

- Residual vertical bone height of 10 mm or less measured at the least vertical height of the mandible on a panoramic radiograph.
- Residual ridge offers no resistance to horizontal or vertical movement; Type D maxilla.
- Muscle attachment location that can be expected to have a significant influence on denture base stability and retention; Type D or E mandible.
- Class I, II, or III maxillomandibular relationships.
- Major conditions requiring pre-prosthetic surgery:

1) complex implant placement, augmentation

2) surgical correction of dentofacial deformities;

3) hard tissue augmentation required;

4) Major soft tissue revision required, i.e., vestibular extensions with or without soft tissue grafting.

- History of paraesthesia or dysesthesia.
- Insufficient interarch space with surgical correction required.
- Acquired or congenital maxillofacial defects.
- Severe oral manifestation of systemic disease or conditions such as sequelae from oncological treatment.
- Maxillo-mandibular ataxia (incoordination).
- Hyperactivity of the tongue can be associated with a retracted tongue position and/or its associated morphology.
- Hyperactive gag reflex managed with medication.
- Refractory patient (a patient who presents with chronic complaints following appropriate therapy), These patients may continue to have difficulty achieving their treatment expectations despite the thoroughness or frequency of the treatments provided.

- Psychosocial conditions warranting professional intervention



### ***6. Reasons for a Classification System***

Classifying edentulous patients according to present criteria can be an aid in numerous aspects of treatment:

- establishing a basis for diagnostic and treatment procedures
- justifying treatment procedures and fees to patients
- screening patients treated in dental faculties for assignment to undergraduate or graduate students
- Provide data for review of treatment outcome
- simplifying communication in discussions of treatment with patients and colleagues.

### ***7. The classes are differentiated from each other according to the following features:***

- The skill level required to treat that class of patient: Does the patient require novice or expert treatment?
- The necessity for modification of basic clinical or laboratory procedures: Will more complicated procedures or more time be required for treatment?
- Overall management and complexity of treatment: Will expert intervention and referral be required?

### ***8. Guidelines for Use of the Complete Edentulism Classification System***

- In those instances when a patient's diagnostic criteria are mixed between two or more classes, any single criterion of a more complex class places the patient into the more complex class. The analysis of diagnostic factors is facilitated with the use of a worksheet.

- Use of this system is indicated for pre-treatment evaluation and classification of patients. Re-evaluation of classification status should be considered following periprosthetic surgery. Retrospective analysis on a post-treatment basis may alter a patient's classification.
- The classification system for complete edentulism is based on the most objective criteria available to facilitate uniform utilization of the system. With such standardization, communication will be improved among dental professionals.
- This classification system will help to identify those patients most likely to require treatment by a specialist or by a practitioner with additional training and experience in advanced techniques.
- This system should also be valuable to research protocols different treatment procedures are evaluated.

**Table 1.** Checklist for Classification of Complete Edentulism

		Class I	Class II	Class III	Class IV
<b>Bone Height-Mandibular</b>					
	21 mm or greater				
	16-20 mm				
	11-15 mm				
	10 mm or less				
<b>Residual Ridge Morphology-Maxilla</b>					
	Type A - resists vertical & horizontal, hamular notch, no tori				
	Type B - no buccal vest., poor hamular notch, no tori				
	Type C - no ant vest, min support, mobile ant. ridge				
	Type D - no ant/post vest, tori, redundant tissue				
<b>Muscle Attachments-Mandibular</b>					
	Type A - adequate attached mucosa				
	Type B - no b attach mucosa (22-27), +mentalis m				
	Type C - no ant b&l vest (22-27), +genio & mentalis m				
	Type D - att mucosa only in post				
	Type E - no att mucosa, cheek/lip moves tongue				
<b>Maxillomandibular Relationships</b>					
	Class I				
	Class II				
	Class III				
<b>Conditions requiring Preprosthetic Surgery</b>					
	Minor soft tissue procedures				
	Minor hard tissue procedures				
	Implants - simple				
	Implants with bone graft - complex				
	Correction of dentofacial deformities				
	Hard tissue augmentation				
	Major soft tissue revisions				
<b>Limited Interarch Space</b>					
	18-20 mm				
	Surgical correction needed				
<b>Tongue Anatomy</b>					
	Large (occludes interdental space)				
	Hyperactive - with retracted position				
<b>Modifiers</b>					
	Oral manifestations of systemic disease				
	mild				
	moderate				
	severe				
	Psychosocial				
	moderate				
	major				
	TMD symptoms				
	Hx of paresthesia or dysesthesia				
	Maxillofacial defects				
	Ataxia				
	Refractory Patient				

