GUIDE BOOK FINAL YEAR BDS

JINNAH MEDICAL AND DENTAL COLLEGE

DEPARTMENT OF PROSTHODONTICS FINAL YEAR

ACADEMIC YEAR: 2022-2023

CONTENTS

VISION

To set local and global standards for quality patient outcomes – creating a culture of excellence to promote a transformative experience for the 21st century clinicians, educators and researchers to benefit all humanity.

MISSION

We are committed to develop well rounded academics, thinkers, clinicians and researchers by strengthening a global view, broadening intellectual foundation and teaching effective communication. It is our aspiration to cultivate creative and critical thinking skills for problem solving, sensitive to cultural and ethical values and responsibilities. Our graduates will be role models and leaders for society.

VALUES

1. Equity
2. Quality
3. Compassionate behavior
4. Social accountability
5. Social Justice
6. Humanistic approach
7. Leadership
8. Innovation
9. Integrity
10. collaboration

PROGRAM LEARNING OUTCOMES -7 STAR DOCTORS – (PMDC)

A JMDC graduate should be able to:

- Demonstrate insight, imagination and curiosity, define one's unique self, one's values and one's place in the world, while incorporating the qualities of a good physician
- Answer complex questions facing physicians, including the role they should play in society, politics and promotion of social justice
- Engage in reflective practice through sound clinical decision making, critical self-assessment and commitment to lifelong learning
- Demonstrate mastery of entry level professional clinical skills used to provide services based on best available evidence
- Display enlightenment and moral virtues to prepare themselves for life and work in a problematic, changing and diverse world
- Be responsible leaders for the good of themselves, their family, community and country
- Be humane and socially equipped individuals, in tune with rights of patients and vulnerable groups
- Show expertise in critical situational analysis
- Respect diversity
- Display effective communication
- Be able to address population health and health system issues based on demography, statistics, epidemiology and cultural nuances

INTRODUCTION TO PROSTHODONTIC DEPARTMENT:

BRIEF OVERVIEW

Prosthodontics, also known as **dental prosthetics** or **prosthetic dentistry**, is the area of dentistry that focuses on dental prostheses. The ADA defines it as:

"The dental specialty pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth or oral and maxillofacial tissues using biocompatible substitutes."

Dental prostheory was pioneered by French surgeon Pierre Fauchard during the late 17th and early 18th century. Despite the limitations of the primitive surgical instruments, Fauchard discovered many methods to replace lost teeth using substitutes made from carved blocks of ivory or bone. He also introduced dental braces to correct the position of teeth using gold wires and silk threads.

A **Prosthodontist** is a dentist who:

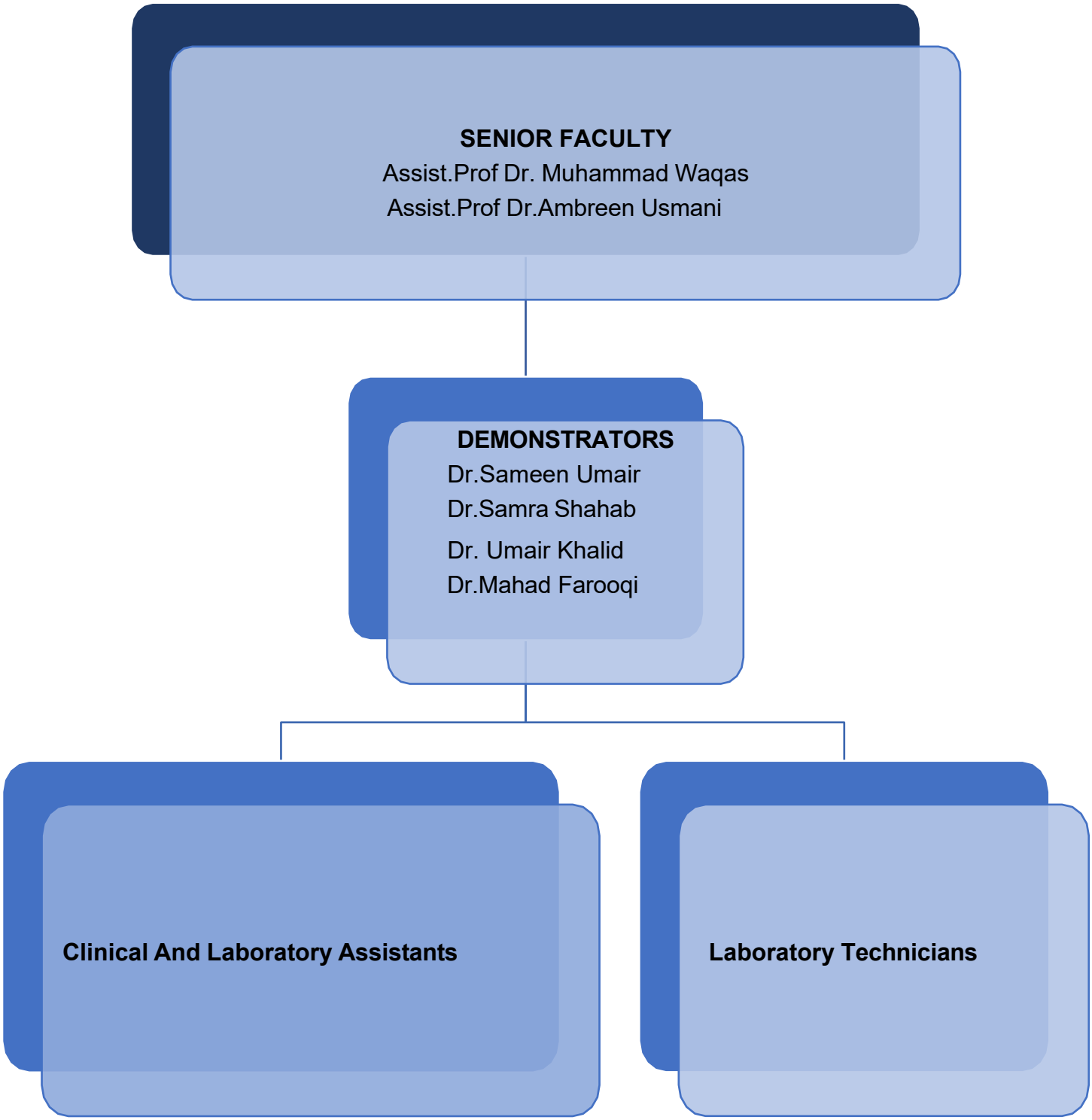
- Specializes in the **aesthetic (cosmetic) restoration and replacement of teeth.**
- Receives three to four years of additional training after dental school
- **Restores optimal appearance and function to your smile**. The planning, surgical placement (sub-crestal prosthodontics) and **restoration of implants** and **rehabilitation of occlusion with prostheses** all fall under the field of prosthodontics.

Prosthodontics Department deals with replacement of missing teeth and tissues of the stomatognathic system by **removable or fixed restorations** to rehabilitate the patient's **aesthetics, speech and masticatory function.** The patients here are treated with utmost care and empathy with standard protocols following cross-infection control and quality treatments. we have equipped the department with the most advanced technology and highly skilled doctors to give patient the best and advanced treatment options for their problems.

At the under-graduate level, we teach our students regarding the basic material handling, patient management, team-work and help them to develop clinical and laboratory skills in removable prosthodontics.

The house officers and post-graduates are also facilitated in our department for their clinical rotation. We provide them with optimal environment in order to help them develop their clinical skills through clinical group discussions, patient management, patient handling, crow preparations and different clinical steps of removable prosthodontics.

We also have acrylic and casting lab equipped with advanced technology for in house fabrication of acrylic partial dentures, fixed partial dentures and cast restorations to provide the quality and cost-effective care to our patients.



HIERARCHY OF THE DEPARTMENT

PATIENT FLOW CHART → RECEPTION DESK

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Patient is asked about the **fixed** or **Removable** prosthesis

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CROWN AND BRIDGE DEPARTMENT

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DIAGNOSIS

(House Officer, Demonstrator)

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TREAMENT

(Demonstrator)

REMOVABLE PARTIAL DENTURE DEPARTMENT

↓

DIAGNOSIS

(House Officer, Demonstrator)

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TREATMENT

(House Officer, Demonstrator)

UNDER SUPERVISION OF SENIOR FACULTY

LEARNING OUTCOMES FOR FINAL YEAR BDS PROSTHODONTICS

COURSE OBJECTIVES

By the end of 4th year, Students will be able to;

COMPLETE DENTURE

DEFINITIONS, APPLIED ANATOMY AND PHYSIOLOGY, PERIPHERAL TISSUE ATTACHMENT OF DENTURE BEARING AREA

- Discuss various types of complete dentures: conventional, immediate and single complete dentures, implant-supported complete denture and overdentures.
- Discuss extra- and intra-oral landmarks of prosthetic importance
- Identify various anatomic landmarks located in maxilla and mandibleDiscuss the border structures that limit the periphery of the denture in the maxilla and the mandible
- List primary and secondary denture stress bearing areas
- Discuss the relief areas

Classifications of various anatomical structures

Classify:

i. Frontal face form (House classification) and lateral face form (Angle)
ii. Residual ridge according to contour (atwood) and morphology (mc garry et al)
iii. lip according to Length, thickness, mobility, support
iv. tongue according to size and position
v. frenal and border muscle attachments
vi. hard and soft palate

TONGUE FORM

- Classify tongue form according to House.
- Describe Selection of occlusion depending on tongue condition:
  - Tongue position;
  - Examination of floor of mouth posture;
  - Tongue biting.

SALIVA

- Discuss the importance of saliva in complete denture retention considering the following:
  - salivary flow and viscosity
  - medical conditions affecting the salivary flow and viscosity
  - xerostomia
- Discuss the salivary factors contributing to complete denture retention
- Manage edentulous patients with altered salivary flow

EVALUATION OF PATIENTS AND TREATMENT ORIENTED PLANNING

- Obtain complete history based on prescribed format

- Perform the following examinations of patient according to the recommended method:
  - General Examination (gait, complexion and personality, cosmetic index, mental attitude of patient)
  - Extra Oral examination including facial features, facial form, facial profile, lower facial height, muscle tone, complexion, lip competency, Mouth opening, lip length, lip competency, Smile line (low, avg, high)
  - TMJ examination (including muscles of mastication, deviation, deflection, clicking/crepitation of TMJ and mouth opening)
  - Neuromuscular examination
  - Intra Oral Examination
  - existing teeth (number of teeth, tilting, drifting, supra-eruption, rotation, undercuts)
  - mucosa (color, condition, thickness)
  - tongue examination including frenal attachment
  - saliva [consistency (normal, thick, ropy), xerostomia]
  - Maxillary arch (Shape/ form, Contour/ cross section, Frenal and border muscle attachment, Palatal vault, Soft palate (classification), Tuberosity, Median palatine raphe and tori)
  - Mandibular arch (Shape/ form, Contour/ cross section, Frenal and border muscle attachment, retromylohyoid fossa, floor of the mouth and tori)
  - others (Inter-arch space, bony prominences, tori, undercuts, Ridge relationships, gag reflex)
  - Previous prosthesis evaluation
  - Radiographic examination (abutment evaluation (if any), periapical pathology, retained residual roots, thickness of mucosa, bone support and quality)
- Discuss the purpose of diagnostic casts
- Discuss the materials and methods of recording centric relation.
- Discuss the procedure of mounting diagnostic casts according to the correct jaw relation
- Mount the diagnostic casts according to the correct jaw relation
- Plan the correct treatment for patients requiring complete dentures
- Justify the treatment plan for patients requiring complete dentures
- Document the treatment plan for patients requiring complete dentures
- Discuss the treatment plan with patients requiring complete dentures following the ethical guidelines
- Refer edentulous patients requiring complex prosthodontic treatment following the recommended guidelines

GENERAL CONDITIONS

- Discuss the functional and parafunctional considerations of occlusion

SYSTEMIC DISORDERS AND APPLIED PATHOLOGY

- Discuss the oral and systemic considerations/pathologies that may influence an adaptive prosthodontic experience like:

- Mucosal conditions(Vesiculoerosive, Systemic lupus erythematosus, Burning mouth syndrome)
- Oral movement disorders
- Salivary dysfunction (Hyposalivation, Hypersalivation)
- Xerostomia
- Sjogren's syndrome
- Diabetes Mellitus

MUSCLE TONE AND MUSCLE DEVELOPMENT

- Discuss the movements of oro-facial muscles pertinent to complete denture fabrication
- Discuss the temporo-mandibular joint, its movements and associated muscles pertinent to complete denture fabrication
- Discuss the conditions that affect motor function of oro-facial muscles associated with complete dentures

ORAL LESIONS WITH SKIN MANIFESTATION

- Discuss various skin conditions with oral manifestations:
- Oral erythroplakia
- Drug induced lichenoid reaction
- Oral lichen planus;
- Systemic lupus erythematosus;
- Reaction to dentifrices and chlorhexidine;
- Reaction to smokeless tobacco;
- Benign migratory glossitis;
- Leukoedema;
- White sponge nevus.

PSYCHIATRIC ASPECTS IN PROSTHODONTICS

- Discuss the different personality types, the doctor's behavior, dentist-patient communication and patient satisfaction pertinent to prosthetic dentistry

ORAL CONDITIONS OF DENTURE BEARING AREA

- Discuss the Direct Sequelae Caused by Wearing Removable Prostheses (Mucosal reactions, Oral galvanic currents, altered taste perception, burning mouth syndrome, Gagging, Residual ridge reduction, Periodontal disease (abutments), Caries (abutments), Denture induced stomatitis, Flabby ridge, Traumatic ulcer, Epulis fissuratrum, Angular cheilitis, Candidiasis)
- Describe Denture irritation hyperplasia, its cause mechanism and management
- List the etiological factors causing traumatic ulcers and cheek biting
- Manage traumatic ulcers and cheek biting in patients presenting to prosthodontic OPD
- Define denture stomatitis.
- Classify Denture stomatitis
- Discuss the management of denture stomatitis

- Describe Kelly's Syndrome.
- Discuss its features
- Discuss Indirect Sequelae Caused by Wearing Removable Prostheses

ORAL MUCOSA: RESISTANT AND NON RESISTANT

- Discuss the types and distribution of oral mucous membrane.
- Describe the mucosal response to oral prosthesis.

ALVEOLAR BONE RESORPTION

- Discuss the importance of preservation of natural dentition.
- Discuss alveolar bone resorption after tooth extraction
- Discuss alveolar bone resorption in patients wearing complete dentures and overdentures
- Differentiate between bone resorption rate and pattern in maxilla and mandible
- Discuss bone conditions (osteoporosis and arthritis).
- Discuss the management of highly resorbed ridges

FACE FORMS

- Classify patients according to various face forms and facial profiles
- Record lower facial height on patients

FUNDAMENTALS OF DENTURE RETENTION AND CONTRIBUTING FACTORS

- Discuss the anatomical, physiological, physical, mechanical and muscular factors and dislodging forces affecting the complete denture retention

MOUTH PREPARATION FOR EDENTULOUS PATIENTS

- Describe in detail the nonsurgical methods to improve the patient’s denture foundation
- List the preprosthetic surgical methods to improve the patient’s denture foundation
- Discuss the various surgical methods for mouth preparation of patients requiring complete dentures
- List the Indications for maxillary tori removal
- Describe the various methods used for the enlargement of the denture bearing areas

BIOMECHANICS OF COMPLETE DENTURE PROSTHODONTICS

- List the factors that affect the successful denture fabrication
- Define Retention
- Discuss the anatomical, physiological, physical, mechanical and muscular factors and dislodging forces affecting the complete denture retention
- Define Pascal’s law.
- Discuss the procedure and mechanism of evaluation of retention with considerations to the Pascal’s Law.

- Define stability
- Discuss the factors affecting the stability of complete dentures
- Define support
- Discuss the factors affecting the support of complete dentures

IMPRESSION TECHNIQUES

- Define impression materials. Discuss the various materials suitable for recording CD impressions
- List the objectives and principles of an impression for complete dentures
- Justify the selection of impression technique for patients requiring prosthesis with considerations to the relevant theories and materials
- Explain the selected impression technique to patients requiring complete dentures following the ethical guidelines
- Define and classify the impression tray used for CD impression
- Describe requirements of an ideal impression tray.
- Record the impression of jaws using the correct technique
- Discuss the disinfection of various impression materials

PASCAL'S LAW AND ITS COROLLARIES

- Define Pascal's law.
- Discuss the procedure and mechanism of evaluation of retention with considerations to the Pascal's Law.

STABILITY

- Define stability.
- Discuss the factors affecting stability:
  - Vertical height of the residual ridge;
  - Quality of the soft tissue covering the ridge;
  - Quality of the impression;
  - Occlusal rims;
  - Arrangement of teeth;
  - Contour of the polished surface.

OCCLUSION

- Define the basic terminologies of occlusion
- Describe the different concepts of occlusion in completely edentulous patient (Bilateral balanced occlusion, Mono plane(non- balance) occlusion, Lingualized occlusion)
- Discuss characteristics, importance, general considerations and types of balanced occlusion
- Discuss advantages, disadvantages, indications, contraindications of types of occlusion

- Describe factors influencing balanced occlusion
- Describe compensatory curves (Curve of Monsoon, Curve of Spee and Curve of Wilson)

MAXILLOMANDIBULAR RELATIONS

- Define maxilla-mandibular relation.
- Discuss mandibular movements in the frontal sagittal and horizontal planes. (Posselt's Envelope of motion)
- Discuss the anatomic determinants of mandibular movements.
- Define the Centric relation, Centric occlusion, rest position, muscular position, intercuspal position, retruded contact position, Excursive movements (working, non- working)
- Define rest vertical dimension and occlusal vertical dimension.
- Define the terms record base and occlusal rim.
- List the materials used for record base and occlusal rims
- Construct maxillary and mandibular occlusal rims for edentulous patients according to the correct protocol
- Establish the labial form of occlusal rims considering the facial landmarks, fullness of upper lip, philtrum, nasolabial fold and oral commissures
- Define Orientation relations, vertical relations and horizontal relations
- Establish the occlusal plane and maxillomandibular relations for edentulous patients
- Classify maxillomandibular relations on the basis of orientation, vertical and horizontal relations and resting and occlusal vertical dimensions

ARTICULATORS; THEORIES OF ARTICULATION

- Discuss function, types, uses, advantages and disadvantages, purpose and requirements of an articulator
- Identify the different types of articulators
- Classify articulators on the basis of the following parameters:
  - theories of occlusion
  - simulation of jaw movements their adjustability
- Discuss protrusive and lateral records.
- Write Hanau's formula

FACEBOW

- Discuss facebow and its types
- Discuss errors in facebow recording
- Describe situations where facebow is not required

- List the steps for recording the transverse hinge axis

SELECTION AND ARRANGEMENT OF TEETH

- Select anterior teeth according to size, form and color of teeth on the basis of various patient factors for edentulous patients
- Select posterior teeth according to size, form and color of teeth on the basis of various patient factors for edentulous patients
- Discuss the nine parameters of smile
- Discuss advantages and disadvantages of anatomic, non-anatomic and cusp less teeth
- Justify the teeth selection for complete dentures considering various patient factors
- Discuss the ten landmarks for CD teeth setup.
- Arrange artificial teeth on edentulous models
- Justify the arrangement of artificial teeth considering various patient factors
- Discuss the setup for retrognathic and prognathic facial skeletons.

SPEECH CONSIDERATIONS FOR COMPLETE DENTURES

- Discuss phonetical considerations relevant to complete dentures

TRY-IN COMPLETE DENTURE FABRICATION

- Conduct preliminary evaluation of complete denture on articulator
- Conduct complete denture try-in considering the following:
  - individual trial denture in mouthlip and cheek support
  - occlusal plane
  - vertical height
  - centric relation
  - posterior palatal seal

INSERTION OF COMPLETE DENTURE, MANAGEMENT OF POST INSERTION COMPLAINTS AND RECALL

- Discuss in detail the final processing of the complete dentures.
- Discuss in detail the materials used as denture base
- Describe different types of curing cycles.
- Describe the role of Pressure indication paste in adjustment of denture base
- Insert the finished denture on the patient according to the recommended protocol.
- Assess the fitting and functioning of complete denture at insertion considering various factors pertinent to the prosthesis and the patient
- Manage the fitting and functioning of complete denture at insertion considering various factors

pertinent to the prosthesis and the patients

- Communicate post-insertion instruction to the complete denture patients effectively
- Manage post-insertion complaints on complete denture patients on recall visit following the recommended guidelines
- Justify the management of post-insertion complaints of complete denture patients

IMMEDIATE/ REPLACEMENT DENTURES AND OVERDENTURES

- Discuss the classification, purpose, indications, contraindication, clinical and laboratory procedures for immediate/replacement dentures and overdentures
- Discuss the importance of multidisciplinary approach in the management of patients requiring immediate/replacement dentures and overdentures
- Demonstrate the insertion, follow-up and maintenance of immediate dentures and overdentures
- Describe the criteria for abutment selection in overdenture

SINGLE COMPLETE DENTURE

- Discuss the management of problems associated with single complete dentures considering all the clinical and laboratory procedures and various patient factors
- Discuss the common occlusal disharmonies and ways to adjust them.
- Discuss the methods to achieve balanced occlusion in single CD
- Explain the tooth modifications techniques to harmonize occlusion in single CD patient

COMBINATION SYNDROME

- Discuss the etiology, features and management of combination syndrome

COMPLETE DENTURE RELINING, REBASING AND COPY DENTURES

- Discuss the principles, indications, contraindications and clinical and laboratory procedures for complete denture relining, rebasing and repair, and copy dentures

CROWNS AND FIXED PARTIAL DENTURES

BASICS OF CROWNS AND FIXED PARTIAL DENTURES

- Define the basic terminologies pertinent to crowns and fixed partial dentures
- Discuss the various components of fixed partial dentures
- Discuss the various types of crowns and fixed partial dentures
- Discuss the indications and contraindications for fixed partial dentures
- Discuss the applied anatomy and physiology for temporomandibular joint, muscles of mastication and dentition pertinent to crown and fixed partial denture treatment
- Describe Posselt’s Envelop of Motion

EVALUATION OF PATIENTS AND PATIENT ORIENTED TREATMENT PLANNING

- Obtain complete history based on prescribed format
- Perform the following examinations of patient according to the recommended method:
  - General Examination (gait, complexion and personality, cosmetic index, mental attitude of patient)
  - Extra Oral examination including facial features, facial form, facial profile, lower facial height, muscle tone, complexion, lip competency, Mouth opening, lip length, smile line (low, avg, high)
  - TMJ examination (including muscles of mastication, deviation, deflection, clicking/crepitation of TMJ and mouth opening)
  - Neuromuscular examination
  - Intra Oral Examination
  - existing teeth (number of teeth, tilting, drifting, supra-eruption, rotation, undercuts)
  - mucosa (color, condition, thickness)
  - tongue examination including frenal attachment
  - saliva [consistency (normal, thick, ropy), xerostomia]
  - occlusion (canine guided, group function, mutually protective, inter-arch space)
  - others (midline mouth opening, occlusal stops, periodontal condition, residual alveolar ridge classification, residual roots, tooth surface loss, prosthesis, gag reflex)
  - Radiographic examination (crown to root ratio, periapical pathology, retained residual roots, thickness of mucosa, bone support and quality, root configuration of abutment teeth)
- Discuss the purpose of diagnostic casts
- Discuss the materials and methods of recording centric relation.
- Discuss the procedure of mounting diagnostic casts according to the correct jaw relation
- Mount the diagnostic casts according to the correct jaw relation
- Discuss the various fixed treatment options
- Discuss the various factors involved in the treatment planning of FDP
- Discuss the Design consideration for individual conditions in FDP
- Plan the correct treatment for patients requiring fixed partial dentures
- Justify the treatment plan for patients requiring fixed partial dentures
- Document the treatment plan for patients requiring fixed partial dentures
- Discuss the treatment plan with patients requiring fixed partial dentures following the ethical guidelines
- Refer partially edentulous patients requiring complex prosthodontic treatment following the recommended guidelines

<u>BIOMECHANICS OF ORAL CAVITY AND CONTRIBUTORY FACTORS</u>

- Discuss the bio mechanical consideration for fixed partial dentures

<u>ORAL MANIFESTATIONS OF LOCAL AND SYSTEMIC DISEASES</u>

- Discuss the oral and systemic considerations/pathologies that may influence an adaptive prosthodontic experience

FIXED PARTIAL DENTURE AND ITS TYPES

- Discuss the various partial and full coverage indirect restorations
- Describe the principles of tooth preparation for indirect prosthesis
- Discuss the indications, contraindications, required clinical assessment and steps of preparation for provision of inlay, onlay and different types of veneer
- Discuss the materials, impression techniques, clinical and laboratory procedures for the fabrication of indirect prosthesis
- Describe the principles of tooth preparation for indirect prosthesis in reference to:
  - Biological consideration
  - Mechanical consideration
  - Esthetic consideration

ENDODONTIC CONSIDERATIONS

- Discuss the endodontic considerations of abutment tooth.
- Discuss and classify post and core.
- Discuss the selection criteria of post.

AESTHETIC CONSIDERATIONS

- Discuss the aesthetic considerations of FPD
- Describe Smile design
- Discuss the Role of CAD-CAM in aesthetics

PONTIC DESIGN

- Classify pontic designs
- Classify ridge defects according to siberts
- Discuss the factors effecting pontic design

(available space, contour of ridge, amount of occlusal load)

- Discuss various biological, mechanical and esthetics considerations for successful pontic design
- Discuss the general and material considerations of pontic design

TOOTH PREPARATION AND CROWN DESIGN

- Describe the indications and contraindications of different types of crowns based on material (Porcelain fused to metal crown, All metal crown, All ceramic crown)
- Prepare teeth for crown placement for partially dentate patients considering various patient factors
- Justify the tooth preparation design pertinent to different types of crown for various patients

TEMPORIZATION

- Discuss the biological, mechanical and esthetic considerations for temporization
- Describe different materials used to fabricate provisional restoration
- Discuss different techniques used to fabricate provisional restorations

TISSUE MANAGEMENT AND RECORDING IMPRESSION FOR FIXED PROSTHESIS

- Discuss the various techniques for fluid control and soft tissue management
- Discuss various methods of tissue displacement in detail
- Justify the impression technique employed for fixed prosthesis in various patients
- Record the impression of jaws after tooth preparation using the recommended technique_
- Discuss disinfection of various impression materials

Shade selection

- Discuss factors influencing shade selection.
- Describe guidelines for accurate shade matching.
- Discuss various methods of shade selection.

CEMENTATION

- Discuss factors to assess at try-in stage
- Classify different luting agents
- Select the suitable material for cementation of fixed prosthesis
- Justify the selection of material used for cementation of fixed prosthesis
- Discuss cementation protocol for different types of fixed partial dentures

FOLLOW-UP AND REPAIR

- Discuss the follow-up and repair of FPD
- Discuss the possible complications and management
- Explain failures in fixed partial dentures

IMPLANTOLOGY

- BASICS OF IMPLANTOLOGYDefine the basic terminologies pertinent to implantology
- Discuss the various components and types of implants
- Discuss the advantages, disadvantages, indications and contraindications of implants

IMPRESSION TECHNIQUES

- Discuss the various impression techniques in implantology

OSSEOINTEGRATION AND BIOCOMPATIBILITY

- Discuss osteointegration, bio-integration and pertinent factors and theories
- Describe the various Factors influencing the osteointegration (patients and surgical related)
- Discuss various methods of assessing osteointegration

PROSTHODONTIC OPTIONS

- Discuss the various prosthodontics options for partially dentate and edentulous patients requiring implant prosthesis
- Discuss the advantages and disadvantages of screw- and cement-retained prosthesis
- Discuss indications and contraindications of implant supported restorations.

LIMITATIONS OF IMPLANTS

- Discuss the limiting factors pertinent to the placement of implants

CLINICAL AND LABORATORY PROCEDURES IN IMPLANTOLOGY

- Discuss the clinical and laboratory procedures pertinent to fabrication of implant restorations

MAXILLOFACIAL PROSTHODONTICS

CLASSIFICATION OF CONGENITAL AND ACQUIRED DEFECTS

- Discuss the classification of various congenital and acquired defects in patients requiring maxillofacial prosthesis

PRINCIPLES OF GOVERNING MANAGEMENT OF PATIENTS PRESENTING WITH VARIOUS DEFECTS

- Discuss the management of mandibular defects and mandibularguidance prosthesis
- Discuss the management of soft and hard palate defects

OBTURATORS

- Define obturators
- Discuss the different types of obturators
- Discuss different methods of retention of an obturator
- Discuss the advantages and retention of surgical obturator prosthesis

CLEFT PALATE PROSTHESIS

- Describe various cleft palate prosthesis
- Discuss presurgical nasoalveolar molding appliance

SPEECH AID PROSTHESIS

- Discuss the classification of speech aid prosthesis based on various parameters
- Discuss advantages of speech aid prosthesis

FACIAL PROSTHESIS

- Discuss the prosthodontic management for patients presenting with auricular, nasal, ocular, lip and cheek defects

TMD SPLINTS

- Discuss the various types and indications of splints

BITE RAISING APPLIANCES

- Discuss the Dahl Appliance and anterior bite plane

SPLINTS AND STENTS

- Describe the shielding and positioning stents

OCCLUSION INCLUDING TMD/MPD

- Discuss anatomy and physiology of temporomandibular joint and related tissues
- Discuss the classification of temporomandibular joint disorders.
- Discuss optimum functional occlusion
- Discuss canine guided, group function and mutually protected occlusal schemes
- Discuss various determinants of occlusal morphology

- Discuss the etiology of TMDs.
- Discuss the strategy to formulate provisional and definitive diagnosis of TMDs
- Formulate the management plans for various patients presenting with TMDs including supportive and definitive therapies
- Justify the management plans for various patients presenting with TMDs

GERODONTOLOGY

- Discuss the Impact of edentulism in old age (Mucosa, Bone, Saliva, Jaw movement, Taste and smell sensations, Nutrition)
- Discuss the consequences of bone loss in edentulous patients (anatomical, soft tissue, esthetics, psychological)
- Discuss the effects of various medications on oral health of geriatric patients
- Discuss the various medical conditions with oral manifestations in geriatric patients
- Discuss the causes, clinical features, diagnosis and management of patients with xerostomia
- Discuss the problems encountered in denture patients with xerostomia
- Discuss microbiology, predisposing factors, clinical features, and diagnosis of root caries in prosthodontic patients
- Discuss the nutritional balance in geriatric patients requiring prosthodontics
- Discuss the etiology and classification of tooth wear.
- Discuss the general and prosthodontic management of tooth wear.
- Discuss the impact of edentulism in old age.

Prosthodontic considerations to the mucosa, bone, saliva, jaw movements, taste and smell sensations, teeth and nutrition related to ageing.

CLINICAL SKILLS

COMPLETE DENTURE

DEFINITIONS, APPLIED ANATOMY AND PHYSIOLOGY, PERIPHERAL TISSUE ATTACHMENT OF DENTURE BEARING AREA

- Identify extra- and intra-oral landmarks of prosthetic importance
- Identify the border structures that limit the periphery of the denture in the maxilla and the mandible

SALIVA

- Manage edentulous patients with altered salivary flow

EVALUATION OF PATIENTS AND TREATMENT ORIENTED PLANNING

- Obtain complete history based on prescribed format
- Perform the following examinations of patient according to the recommended method:

- General Examination (gait, complexion and personality, cosmetic index, mental attitude of patient)
- Extra Oral examination including facial features, facial form, facial profile, lower facial height, muscle tone, complexion, lip competency
- TMJ examination (including muscles of mastication, deviation, deflection, clicking/crepitation of TMJ and mouth opening)
- Neuromuscular examination
- Intra Oral Examination
- existing teeth (number of teeth, tilting, drifting, supra-eruption, rotation, undercuts)
- mucosa (color, condition, thickness)
- tongue examination including frenal attachment
- saliva [consistency (normal, thick, ropy), xerostomia]
- occlusion (canine guided, group function, mutually protective, inter-arch space)
- others (midline mouth opening, occlusal stops, periodontal condition, residual alveolar ridge classification, residual roots, tooth surface loss, prosthesis, gag reflex)
- Radiographic examination (crown to root ratio, periapical pathology, retained residual roots, thickness of mucosa, bone support and quality, root configuration of abutment teeth)

- Mount the diagnostic casts according to the correct jaw relation
- Plan the correct treatment for patients requiring complete dentures
- Justify the treatment plan for patients requiring complete dentures
- Document the treatment plan for patients requiring complete dentures
- Discuss the treatment plan with patients requiring complete dentures following the ethical guidelines
- Refer edentulous patients requiring complex prosthodontic treatment following the recommended guidelines
- Record lower facial height on patients

<u>OCCLUSION</u>

- Record the occlusion of edentulous patients considering the various occlusal schemes according to the correct protocol

<u>ORAL CONDITIONS OF DENTURE BEARING AREA</u>

- Manage the oral mucosal conditions associated with denture bearing area

<u>IMPRESSION TECHNIQUES</u>

- Explain the selected impression technique to patients requiringcomplete dentures following the ethical guidelines
- Record the impression of jaws using the correct technique

<u>MAXILLOMANDIBULAR RELATIONS</u>

- Construct maxillary and mandibular occlusal rims for edentulous patients according to the correct protocol

- Establish the labial form of occlusal rims considering the facial landmarks, fullness of upper lip, philtrum, nasolabial fold and oral commissures
- Establish the occlusal plane and maxillomandibular relations for edentulous patients

ARTICULATORS; THEORIES OF ARTICULATION

- Identify the different types of articulators

SELECTION AND ARRANGEMENT OF TEETH

- Select anterior teeth according to size, form and color of teeth on the basis of various patient factors for edentulous patients
- Select posterior teeth according to size, form and color of teeth on the basis of various patient factors for edentulous patients
- Arrange artificial teeth on edentulous models
- Justify the arrangement of artificial teeth considering various patient factors

TRY-IN COMPLETE DENTURE FABRICATION

- Conduct preliminary evaluation of complete denture on articulator
- Conduct complete denture try-in considering the following:
  - individual trial denture in mouth
  - lip and cheek support
  - occlusal plane
  - vertical height
  - centric relation
  - posterior palatal seal

INSERTION OF COMPLETE DENTURE, MANAGEMENT OF POST INSERTION COMPLAINTS AND RECALL

- Insert the finished denture on the patient according to the recommended protocol.
- Assess the fitting and functioning of complete denture at insertion considering various factors pertinent to the prosthesis and the patient
- Manage the fitting and functioning of complete denture at insertion considering various factors pertinent to the prosthesis and the patients
- Communicate post-insertion instruction to the complete denture patients effectively
- Manage post-insertion complaints on complete denture patients on recall visit following the recommended guidelines
- Justify the management of post-insertion complaints of complete denture patients

CROWNS AND FIXED PARTIAL DENTURES

EVALUATION OF PATIENTS AND PATIENT ORIENTED TREATMENT PLANNING

- Obtain complete history based on prescribed format
- Perform intra-oral and extra oral examination of patients presenting to the prosthodontics OPD following the recommended guidelines
- Mount the diagnostic casts according to the correct jaw relation
- Plan the correct treatment for patients requiring fixed partial dentures

- Document the treatment plan for patients requiring fixed partial dentures
- Discuss the treatment plan with patients requiring fixed partial dentures following the ethical guidelines
- Refer partially edentulous patients requiring complex prosthodontic treatment following the recommended guidelines

TOOTH PREPARATION AND CROWN DESIGN

Prepare teeth for crown placement for partially dentate patients considering various patient factors

RECORDING IMPRESSION FOR FIXED PROSTHESIS

- Record the impression of jaws after tooth preparation using the recommended technique_

INTERNAL ASSESSMENT

10% (Pre-professional Examination, Midterm Examination, Assignments and Class Presentations, Clinical Logbooks)

ANNUAL EXAMINATION

90% (MCQS, OSCE)

PROSTHODONTICS ROTATION OF FINAL YEAR BDS

S.NO.	PROCEDURE SKILLS	TEACHING METHODOLOGY	ASSESSMENT TOOLS
	By the end of rotation, the final year students should be able to demonstrate on the ideal mold/patient the following:		The students will be assessed mid-rotation and end-of rotation test
1.	Instruments, lab protocol and chair positioning	Demonstration of clinical steps on the patient Teaching via laboratory demonstration Teaching on the ideal models poured in the agar molds	**1.** OSCEs **2.** Chair side viva **3.** Direct observation of clinical skills **4.** Direct observation of procedural skills Will be assessed during: 1. Daily Supervision 2.Mid-Roation Test 3.End Of Rotation Test
2	History taking and examination		
3	Maxillary and mandibular impressions for removable partial dentures and complete dentures		
4	Pouring of the impressions		
5	Block outs and direct retainers		
6	Custom tray fabrication for secondary impression		
7	Partial denture and complete denture (heat cure) base plate fabrication		
8	Fabrication of wax occlusal rims		
9	Maxilla mandibular relation record and mounting on the articulator		
10	Selection of anterior and posterior teeth		
11	Arrangement of anterior and posterior teeth		
12	Clinical wax try in		
13	Final finishing (correction of denture base & tooth position		
14	Carving and festooning		
15	Investment of the wax up in the flasks		
16	De-waxing and packing with heat cure acrylic polymer		
17	Finishing and polishing		
18	Clinical insertion of the prosthesis and adjustments		
19	Post-insertion instructions and follow up visits		

DETAILS OF CLINICAL ROTATION FINAL YEAR BDS
ORIENTATION SESSION:

Introduction to Department and Laboratory

Introduction to Faculty

Standard Operating Procedures for Laboratory

Standard Operating Procedures for Clinics

Log Book Record Maintenance

PROSTHODONTICS POSTING FOR FINAL YEAR
Eight weeks of posting

DEPARTMENT	DURATION	ACTIVITY/SKILLS TO BE LEARNT
REMOVABLE	08	• Orientation • Chair positioning and history taking • Impression taking • Plaster pouring and making of cast • Fabrication and finishing of custom tray • Border molding and secondary impression • Fabrication of baseplate and occlusal rims • Jaw relation taking

		• Mounting of cast on articulator • Teeth selection and teeth setup • Try- In • Finishing and festooning of teeth setup • Investment of model • Dewaxing • Bench curing • Finishing and polishing of denture • Final insertion • Post-operative Instructions

SAMPLE WEEK # 1 SCHEDULE- FINAL YEAR BDS CLINICAL ROTATION

DAY 1:

10:30 AM to 11:30 AM (Orientation)

11:30 AM to 12:30 PM (Study Cast Demonstration and Model pouring)

12:30 PM to 01:30 PM (Diagnosis and Treatment Planning Demonstration)

DAY 2:

10:30 AM to 11:30 AM (TEST Instruments/materials used in Prosthodontics – viva based)

11:30 PM to 01:30 PM (Pre-clinical demonstration & Students Hands-on : Base plate and Bite Rims)

DAY 3:

10:30 AM to 12:00 PM (Pre-Clinical demonstration: Model Articulation and setting up teeth)

12:00 PM to 01:30 PM (Students Hands-on)

DAY 4:

10:30 AM to 11:30 AM (Pre-Clinical demonstration: Waxing and Flasking)

11:30 AM to 01:30 PM (Students Hands-on)

DAY 5:

Final Denture Finishing

RECOMMENDED BOOKS (Latest Edition):

REMOVABLE PARTIAL DENTURE:

McCRACKEN'S REMOVABLE PARTIAL PROSTHODONTICS, THIRTEENTH EDITION
Alan B. Carr

David T. Brown

FIXED PARTIAL DENTURE:

CONTEMPORARY FIXED PROSTHODONTICS, FIFTH EDITION
Stephen F. Rosenstiel
Martin F. Land Junhei
Fujimoto

COMPLETE DENTURE

PROSTHODONTIC TREATMENT FOR EDENTULOUS PATIENTS: COMPLETE DENTURES AND IMPLANT-SUPPORTED PROSTHESES

George Zarb, John A. Hobkirk, Steven E. Eckert,
and Rhonda F. Jacob

OCCLUSION AND TMD'S

MANAGEMENT OF TEMPOROMANDIBULAR DISORDERS AND OCCLUSION 7 ED

Jeffrey P. Okeson, Dmd

IMPLANTOLOGY

DENTAL IMPLANT PROSTHETICS, SECOND EDITION

Carl E. Misch

MAXILLOFACIAL PROSTHODONTICS

CLINICAL MAXILLOFACIAL PROSTHETICS

Thomas D. Taylor. DDS. MSD

THREE MONTHS ROTATION OF HOUSE OFFICERS

Department of Prosthodontics

Three months of posting

DEPARTMENT	DURATION
Informed consent, counselling Communication skills and professionalism History and examination of removable and fixed prosthodontics Diagnosis and treatment planning	4 weeks
Patient selection for removable partial dentures and complete dentures Pre-prosthetic evaluation and mouth preparation Fabrication of removable partial dentures through supervised clinical execution of steps and laboratory communication	4 weeks
Patient selection and evaluation of abutments for fixed partial dentures Tooth preparation mock ups on stone cast, phantom tooth and extracted teeth Planning of fixed partial denture bridges Supervised tooth preparation on tooth canal treated tooth Supervised Preparation of teeth for fixed partial dentures and crowns	4 weeks

Each house officer will present any clinical case or case report on fixed and removable prosthodontics

Posting of in crown and bridge department is based upon the performance on the mock up tooth preparations

DRESS CODE POLICY

All Students are responsible for maintaining clean, neat, and well-fitting clothing. Students not engaged in direct patient care but presenting in clinic, for whatever reason, must maintain infection control and safety standards and present themselves in a professional manner.

A. Personal Hygiene and Hair

1. Hair should be clean and well groomed.
2. Beards and mustaches must be clean, neatly trimmed, and well groomed.
3. Hair must be kept out of the field of operation so that it does not require handling during treatment procedures.
4. Personal cleanliness and good oral hygiene must be maintained.
5. Body hygiene is required so that offensive body odor is avoided.
6. Strong perfumes, colognes, or after-shave lotions must be avoided.
7. Hands and fingernails must be kept clean.
8. Fingernails must be kept trimmed and well-manicured.

B. Jewelry

1. All jewelry should be kept to a minimum and out of the field of operation.
2. Jewelry should not affect one's ability to wear gloves, masks or gowns.

C. Attire

Professional attire or scrubs shall be worn in all classes and laboratories. Scrubs are required in clinic. In clinic and in lab, students must ensure that their attire meets infection control regulations as outlined in the Infection Control Manual.

When representing the JMDC at community service events, students must wear their JMDC scrubs or professional attire with Lab-coat along with their nametag. Students must abide by all infection control and safety standards with regards to dress.

1. Professional Attire (examples)

a. Dress pants/slacks
b. Khakis
c. Dress shirts (e.g., oxford cloth)
d. Knit or polo shirts with collars
e. Blouses
f. Closed-toed shoes (required for clinic and lab only)

2. Scrubs specifications

a. Scrub colors are limited to Carolina Blue, surgical green, black, gray, or navy blue.
b. Scrubs should be neat and clean with a scrub top and bottom.
c. Scrub top and bottom must be a solid color, with no pattern.

d. Scrub top and bottom must be a matched set.
e. Scrubs must be worn with socks and closed-toe shoes.
f. If worn, athletic shoes must be clean.
g. A clean, plain T-shirt may be worn under scrubs.
h. If long-sleeved, the T-shirt must be plain, with no pattern or other design.

3. Unacceptable attire in class, clinic, or laboratory settings (examples)

a. Shorts, sweats, gym attire
b. Jeans
c. Bare feet
d. Halter tops, tube tops/strapless tops, tank tops with straps <2 inches
e. Low-cut tops
f. See-through clothing
g. Visible undergarments when sitting or standing
h. Head gear (excluding headbands and ties to hold back hair)

D. General Considerations

Each student is expected to keep locker areas, clinical facilities, and preclinical labs in order. All used gowns and trash should be placed in their respective receptacles. Students will be notified of any updates or changes to the JMDC Dress Code policy.

THE END