

## **Paper II: Technical Subject**

### **1. Complete Denture**

#### **1.1 Conventional Complete Denture**

- Terms used in Complete Denture Prosthodontics, scopes and objectives; effects of aging on the edentulous state, sequel of wearing complete dentures, nutrition care for the denture wearing patient
- Art of communication for the management of an edentulous patients, diagnosis and treatment plan for complete denture patients
- Applied anatomy and its importance for retention, stability and support of the denture, pre-prosthetic surgery

1.1.1 Objectives and principles of impression making, impression materials used for complete edentulous patient, its advantage and disadvantage, classification of impression materials, technique of edentulous impression, positive replica, bite block

1.1.2 Different types of articulators and facebows, recording of mandibular movements and maxilla-mandibular relationships, theories of complete denture occlusion, selection and arrangement of artificial teeth for denture, trial of the waxed-up denture, waxing, contouring and processing of dentures, denture characterization

1.1.3 Mechanism of speech, role of oral structures and the effects of denture in phonetics, evaluate and correction of the problems in denture before insertion and post insertion instruction, management of complains in complete denture, management of geriatric and medically compromised patients, repair, reline, rebase and duplicate the existing denture

#### **1.2 Immediate Denture**

1.2.1 Terms used, advantages and disadvantages, indications and contraindication, types of immediate denture with their advantages and disadvantages, diagnosis and treatment plan for immediate denture, patient preparation and clinical procedures for immediate denture, selection and try in, post insertion complications, occlusion

1.2.2 Maintenance and follow up

1.3 **Single Complete Dentures** : Terms used, indications, contraindication, advantages, disadvantages of single complete denture, evaluation of the problem related to single denture, diagnosis and treatment plan for single complete denture and its clinical steps, selective grinding of natural teeth during final insertion of the denture, management of the potential adverse treatment out comes in single denture, maintenance and after care

1.4 **Tooth and implant supported Over Denture:** Terms used, general consideration of over denture, diagnose and treatment plan, tooth preparation, clinical and lab

steps in over denture. Attachments, coping, stress breakers, precision attachments in over denture, management of complication of over denture, general consideration of implant supported over denture, biomechanics in tooth supported and implant supported overdenture

## 2. **Removable Partial Denture**

- 2.1 Terminology, classification of partially edentulous arches, indications, contraindications, advantages, disadvantages of cast partial dentures, difference between cast partial and temporary denture, biomechanics of Removable partial denture, various types of major connector, minor connector, direct and indirect retainer, rest and rest Seats, denture bases
- 2.2 Principles of removable partial denture design, diagnosis and treatment plan, mouth and abutment preparation, impression materials and techniques used for partially edentulous arches, retention and support for the distal extension denture bases, occlusion, relining, rebasing, repair, work authorization to the lab technician
- 2.3 Clinical and lab steps of cast partial denture, aims, objective and steps of surveying, impression techniques, master cast, duplication, wax pattern, casting, try in, arrangement of artificial teeth, processing, lab remount, insertion, follow up and maintenance
- 2.4 Precision attachment, stress breakers, esthetic considerations in cast partial denture, different forms and objective of temporary dentures
- 2.5 Flexible dentures, indications, contraindications, advantages, disadvantages, clinical and lab steps, materials used and biomechanics
- 2.6 Multidisciplinary approach

## 3. **Fixed Partial Denture**

- 3.1 Terminologies, scopes, classifications, advantages, disadvantages, indications, contraindications of fixed prosthodontics
- 3.2 History, clinical, radiographic and mounted casts examinations for fixed partial denture, diagnosis of the cases, build treatment plan, selection of abutment, and evaluation of fixed partial denture configuration, periodontal consideration and mouth preparation for fixed partial dentures, fundamentals of occlusion, various types of articulators and face bows, interocclusal records, cast articulation, program articulators
- 3.3 Basic principles of tooth preparations, tooth preparation for complete cast crown, metal ceramic crown, all ceramic restorations, laminates, partial veneer crown, inlay and onlay
- 3.4 Fluid control, soft tissue management, finish line exposure, principles of impression making in fixed partial denture, impression materials and techniques, different materials, types, techniques of provisional restoration, shade selection, principles of color science and esthetic, laboratory communications, clinical

## लोक सेवा आयोग

नेपाल स्वास्थ्य सेवा, डेन्टिस्ट्री समूह, प्रोस्थोडोण्टिष्ट उपसमूह, नवौं (९) तहको खुला र आन्तरिक प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

evaluation of metal try in, ceramic try in and final prosthesis, characterization, luting materials, technique and properties, cementation procedures of different restoration and prosthesis, managements of failures in fixed partial denture

- 3.5 Laboratory procedures related to fixed partial dentures, working casts and dies, wax patterns for all metal, metal ceramic, all ceramic restorations, designing framework, types of residual ridge contour and pontic designs, soldering and welding, fabrication of metal ceramic restoration, all ceramic restoration and resin retain restoration
- 3.6 Restoration of endodontically treated and periodontally comprised tooth
- 3.7 Multidisciplinary approach
4. **Implant Prosthodontics**
  - 4.1 Terminologies, historical perspective, indications, contraindications, advantages, disadvantages of different implant and systems
  - 4.2 Applied anatomy for dental implant, hard and soft tissues response, biomechanics related to occlusal force and implant design
  - 4.3 Properties and bio-compatibility of dental implant materials
  - 4.4 Diagnosis and treatment planning, different prosthetic options, medical, oral, dental and radiographic evaluation and clinical considerations of dental implants, pre-prosthodontic considerations,
  - 4.5 Importance of Diagnostic Imaging, fabrication of different types of templates, implant surgery, prosthodontic considerations during rehabilitation of patients with implant prosthesis, principles of cement and screw retained prosthesis, loading in dental implant, principles of occlusion management of complications and failures associated with implant, maintenance and After care of Dental Implants.
  - 4.6 Coordination with multidisciplinary team for implants therapy
5. **Temporomandibular Joint Disorder and occlusal therapy**
  - 5.1 Functional anatomy, physiology and biomechanics of Stomatognathic system, development and alignment and occlusion, criteria for optimal functional occlusion, determinant of mandibular movements and occlusal morphology
  - 5.2 Hinge axis, centric relation, vertical dimension, neutral zone, and occlusal plane.
  - 5.3 Different types of articulators, basic principles and use
  - 5.4 Etiology of TMJ disorders, classification of TMJ disorders, sign and symptoms of TMJ disorder
  - 5.5 History, clinical and radiographic examination, diagnosis of Temporomandibular Disorder, general consideration of TMD management, specific management of masticatory muscles disorders, temporomandibular joint disorder, chronic mandibular hypomobility and growth disorder
  - 5.6 General considerations on fabrication of occlusal splints, occlusal equilibration and restorative therapy

- 5.7 Principles, philosophies and concepts on full mouth rehabilitation
- 5.8 Coordination with Multidisciplinary team for TMP rehabilitation
  
- 6. **Maxillofacial Prosthodontics**
  - 6.1 Terminology, types, indications, advantages, disadvantages of different types of maxillofacial prostheses
  - 6.2 Behavioral and psychological issues in head and neck cancer, role of chemotherapy and radiotherapy in cancer management
  - 6.3 Clinical and laboratory considerations during rehabilitation of acquired defects of the mandible, hard palate, soft palate, cleft lip and palate and facial defects
  - 6.4 Fabrication of implant supported extra and intra oral prostheses
  - 6.5 Properties and processing of material used in maxillofacial prosthodontics
  - 6.6 Post insertion care and maintenance of maxillofacial prostheses
  
- 7. **Esthetic Dentistry and Recent Advances**
  - 7.1 The fundamentals of esthetic, science of color and principles of smile
  - 7.2 Diagnosis and treatment planning during esthetic rehabilitation
  - 7.3 Indications, contraindications, advantages, disadvantages, properties and processing of esthetic material- direct resins, indirect resins, metal ceramic, all ceramic
  - 7.4 Recent advances on esthetic materials and technologies
  - 7.5 Communication with patients and lab during esthetics rehabilitation
  - 7.6 Interdisciplinary approach for esthetic rehabilitation
  
- 8. **Dental Material Science**
  - 8.1 Basic considerations on dental materials, physical mechanical and biocompatibility,
  - 8.2 Science of dental material used in Prosthodontic rehabilitations- chemistry, Classification, composition, properties, manipulation, setting mechanism, uses, advantages, disadvantages, indications, contraindications
  - 8.3 Recent advances of Impression Materials, Gypsum Products, Die materials, Synthetic Resin, Metal and Metallurgy, Dental Waxes, Investment Materials, Dental Cements, Dental Ceramics, Finishing and Polishing materials. Materials used in Maxillofacial Prostheses and Dental Implant

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