

## लोक सेवा आयोग

नेपाल स्वास्थ्य सेवा, डेन्टिष्ट्री समूह, ओरल एण्ड मेक्जिलो फेसियल सर्जरी उपसमूह, नवौं (९) तह, कन्सल्टेन्ट ओरल एण्ड मेक्जिलो फेसियल सर्जन पदको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको पाठ्यक्रम

### Paper II: Technical Subject

#### 1. General Principle of Surgery

- 1.1 Evolution and History of Oral and Maxillofacial Surgery
- 1.2 Diagnosis, history taking, clinical examination, investigations
- 1.3 Informed consent/medico-legal issues
- 1.4 Concept of essential drugs and rational use of drugs in oral and maxillofacial surgery
- 1.5 Communication skills with patients- understanding, clarity in communication, compassionate explanations and giving emotional support at the time of suffering and bereavement
- 1.6 Principles of surgical audit - understanding the audit process and outcome
- 1.7 Principles of surgery- developing a surgical diagnosis, basic necessities for surgery, aseptic/sterilization technique, incisions, flap designs, tissue handling, hemostasis, dead space management, decontamination and debridement, suturing, edema control, patient general health and nutrition
- 1.8 Medical emergencies - Prevention and management of altered consciousness, hyper sensitivity reaction, chest discomfort, respiratory difficulty
- 1.9 Pre operative workup - Concept of fitness for surgery; basic medical work up; work up in special situation like diabetes, renal failure, cardiac and respiratory illness; risk stratification
- 1.10 Surgical sutures, Properties of suture materials, appropriate use of sutures and drains, different types in OMFS
- 1.11 Post operative care- concept of recovery room care, Airway management, Assessment of Wakefulness, management of cardio vascular instability in this period, Criteria for shifting to the ward, pain management
- 1.12 Wound management- Types, Wound healing, factors influencing healing, basic surgical techniques
- 1.13 Surgical Infections - Asepsis and antisepsis, Microbiological principles, Rational use of antibiotics, special infections like Synergistic Gangrene and Diabetic foot infection, Hepatitis, tuberculosis and HIV infection and cross infection

#### 2. Assessment and Diagnosis

- 2.1 Airway obstruction/management - Anatomy of the airway, principles of keeping the airway patent, mouth to mouth resuscitation, Oropharyngeal airway, endotracheal intubation, Cricothyroidectomy, Tracheostomy
- 2.2 Assessment of trauma-multiple injuries patient, closed abdominal and chest injury penetrating injuries, pelvic fractures, urological injuries, vascular injuries
- 2.3 Maxillofacial trauma - basic principles of treatment, primary care, diagnosis and management of hard and soft tissue injuries of Maxillofacial region including Mandible, Maxilla, Middle third ZMC, Frontal bone, Comprehensive management of poly trauma patients
- 2.4 Aesthetic facial surgery - detailed knowledge of structures of face & neck including skin and underlying soft tissues, diagnosis and treatment planning of

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deformities and condition affecting facial skin, underlying facial muscles, bone, eyelids, external ear etc., surgical management of post acne scarring, face lift, blepharoplasty, otoplasty, facial bone recountouring

- 2.5 Maxillofacial radiology/radio diagnosis - Various diagnostic methods and imaging techniques. Use of ct scan,mri, ultrasound,sialography and arthrogram in OMFS

### **3. Surgery (Cranio-facial Deformities, Laser Surgery, Cryosurgery)**

- 3.1 Orthognathic surgery - Embryology and surgical anatomy of the oro-facial region. Normal and abnormal growth and development of the face and jaws. Investigation, diagnosis and surgical management of dento-facial deformity including the use of grafts. Understanding of the principles of orthodontic treatment and the joint management of dento-facial deformity with the orthodontists. Various osteotomy techniques for correction of dentofacial deformities
- 3.2 Laser surgery - The application of laser technology in the surgical treatment of various Maxillofacial lesions
- 3.3 Distraction osteogenesis for correction of maxillofacial deformities
- 3.4 Cryosurgeries - Principles, the application of cryosurgery in the surgical management of lesion amenable to such surgeries
- 3.5 Cleft lip and palate surgery- detailed knowledge of the development of the face, head and neck diagnosis and treatment planning, Current concepts in the management of cleft lip and Palate deformity, knowledge of nasal endoscopy and other diagnostic techniques in the evaluation ( speech and hearing, concept of multi disciplinary team management)
- 3.6 Craniofacial surgery - basic knowledge of developmental anomalies of face, head and neck basics concept in the diagnosis and planning of various head and neck anomalies including facial cleft, craniosynostosis, syndromes, etc., Current concepts in the management of craniofacial anomalies

### **4. Reconstructive and Therapeutic Techniques (Maxillofacial Pathology, Oncosurgery and Reconstructive surgery)**

- 4.1 Tissue grafting - Understanding of the biological mechanisms involved in autogenous and heterogeneous tissue grafting
- 4.2 Reconstructive oral and maxillofacial surgery – Oral and Maxillofacial reconstruction with various techniques involving hard and soft tissue
- 4.3 Odontogenic and non odontogenic Cyst and tumors of head and neck region and their management - including principles of tumor surgery, giant cell lesion of jaw bones, fibro osseous lesions of jaw
- 4.4 Head and neck oncology – Molecular biology and understanding of the principles of management of head and neck oncology
- 4.5 Micro vascular surgery- basic principles and techniques for reconstruction of head and neck region

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- 4.6 Disorders of the salivary glands- The investigation and treatment of diseases of the minor and major salivary glands. Obstructive and inflammatory condition, Infections and Tumours
- 4.7 Maxillary Sinus pathology - A thorough understanding of the sinus diseases of odontogenic and non-odontogenic origin including tumour, Management of sinus disorders, in particular oroantral communications related to dental procedures
- 4.8 Oral Medicine and Therapeutics- Oral mucosal lesions and oral manifestations of systemic diseases. Precancerous diseases of oral cavity

### **5. Patient Management (Local and general Anesthesia, Implantology and Minor oral surgery)**

- 5.1 Local anaesthesia – Types ,composition , techniques and complications in OMFS
- 5.2 General Anesthesia - stages of Anesthesia, pharmacology of inhalation, intravenous and regional anesthetics, muscle relaxants, conscious sedation
- 5.3 General patient management - competence in physical assessment of patients of surgery, competence in evaluation of patients presenting with acute injury, particularly to maxillofacial region. Competence in the evaluation of management of patients for Anesthesia
- 5.4 All aspects of dento alveolar surgery and its complications – Exodontia, apicoectomy, transplantation , impaction, surgical exposure of impacted teeth
- 5.5 Pre-prosthetic surgery - wide range of surgical reconstructive procedures involving their hard and soft tissues of the edentulous jaws
- 5.6 Implantology –Rationale, diagnosis, treatment planning principles, surgical procedures for insertion of various types of implants. Complications and their management

### **6. Other disorders and infections (Myofacial pain, Nerve Injuries and Maxillofacial infections)**

- 6.1 Facial pain; Facial palsy, neuralgia and nerve injuries. Pain control- acute and chronic pain, cancer and non-cancer pain
- 6.2 Temporomandibular joint disorders - TMJ disorders, TMJ ankylosis – bony and TMJ ankylosis tissue and their sequelae , therapeutic arthroscopic surgery procedures
- 6.3 Neurological disorders of maxillofacial region-diagnosis and management of Trigeminal Neuralgia, MPDS, Bells palsy, Frey's syndrome
- 6.4 Head and Neck Infections- Fascia of head and neck. General and anatomical considerations in the spread of odontogenic space infection with emphasis on the management of pericoronitis, abscess, dry socket, cellulitis (Ludwig Angina), osteomyelitis, and various head and neck potential space infections

### **7. Recent advances in Oral and Maxillofacial Surgery**

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