

ORAL & MAXILLOFACIAL SURGERY: MDS PROGRAM

LEARNING OUTCOMES:

ANALYTICAL LEARNING:

- Thorough examination, evaluation & diagnosis, surgery and an adjunctive treatment of diseases, injuries and deformities/defects (congenital/acquired), involving both the functional and aesthetic aspects of the hard and soft tissues of the oral (mouth) and maxillofacial (jaws, face and associated structures) region.
 - Demonstrate understanding of basic sciences as relevant to Oral & Maxillofacial Surgery.
 - Identify social, economic, environmental and emotional determinants in a given case or community and take them into account for planning and execution at individual and community level.
 - Ability to master differential diagnosis and recognize conditions that may require multi disciplinary approach or a clinical situation outside the realm of the specialty, which he or she should be able to recognize and refer to appropriate specialist.
 - Update himself by self-study and by attending basic and advanced courses, conferences, seminars, and workshops in the specialty of Oral & Maxillofacial Surgery.
 - Ability to teach/guide, colleagues and other students. Use information technology tools and carry out research both basic and clinical with the aim of his publishing his/her work and presenting the same at scientific platform.

SKILLS:

- Take proper history, examine the patient and perform medical and dental diagnostic procedures as well as perform relevant tests and interpret to them to

come to a reasonable diagnosis about the condition in general and Oral & Maxillofacial Surgery in particular and undertake complete patient monitoring including preoperative as well as post operative care of the patient.

- Provide basic life saving support in emergency situations.
- Manage acute infection situations.
- Have a thorough knowledge of infection control measures
- Should have proper knowledge of sterilization procedures Human Values, Ethical Practice and Communication Abilities
- Professional honesty and integrity should be the top priority.
- Dental care has to be provided regardless of social status, caste, creed or religion of the patient.
- Develop communication skills in particular to explain various options available for management and to obtain a true informed consent from the patient.
- Apply high moral and ethical standards while carrying on human or animal research.
- He/She shall not carry out any heroic procedures and must know his limitations in performing all aspects of maxillofacial surgery. Ask for help from colleagues or seniors when required without hesitation.
- Respect patient's rights and privileges including patients right to information

Various treatments which can be performed by trained oral and maxillofacial surgeons

- Dentoalveolar surgery: Surgery to remove difficult tooth extractions/impacted teeth surgical extractions, dental extractions or any minor/major oral surgical procedures in medically compromised patients, bone grafting or preprosthetic surgery to provide better, adequate anatomical foundation for the placement of implants, dentures, or other dental prostheses.
- Preprosthetic surgical procedures including implantology.

- Surgery to insert osseointegrated (bone fused) dental implants and maxillofacial implants for attaching craniofacial prostheses
- Diagnosis and treatment of problems in oral cavity, head, face, neck region
- Benign pathology—cysts, tumors, etc. Treatment of cysts and tumors of both odontogenic and nonodontogenic origin, involving the jaw bones.
- Premalignant lesions and conditions—early detection and treatment of lesions and conditions, such as, oral submucous fibrosis and leukoplakia.
- Malignant pathology—oral cavity, head, face, neck region cancer:
- Management of disorders of maxillary sinuses
- Soft and hard tissue trauma of the oral and maxillofacial region
- Initial and definitive management of traumatic injuries of soft and hard tissues of orofacial region (jaw fractures, cheek bone fractures, nasal fractures, LeFort fracture, skull fractures and eye socket fractures). Post-traumatic reconstruction.
- Chronic orofacial pain disorders management
- Temporomandibular joint (TMJ) disorders
- Temporomandibular joint disorders including internal derangement and ankylosis.
- Salivary gland diseases and their management.
- Corrective jaw surgery—Orthognathic surgery
- Diagnosis and management of dentofacial deformities, either acquired, developmental or congenital.
- Corrective surgery for jaw bones along with dentition-maxillo-mandibular advancement, setback, genioplasty, correction of facial asymmetry, correction of sleep apnea, etc.
- Management of orofacial infections involving the soft and hard tissues and handling life-threatening emergencies due to acute infections.
- Detection and management of facial neurological disorders
Trigeminal neuralgia, Bell's palsy, Frey's syndrome, etc.
- Reconstruction of missing portion of jaw bones with bone graft/distraction osteogenesis.
- Surgical management of the complex airway, snoring and sleep apnea.

POST GRADUATE SYLLABUS

SNO.	SUBJECT	OBJECTIVES
1	APPLIED ANATOMY	<ol style="list-style-type: none"> 1) Anatomy of Head and Neck in detail: Cranial and facial bones 2) TMJ and function 3) Muscles of mastication and facial expression 4) Muscles of neck and back including muscles of deglutition and tongue 5) Arterial supply and venous drainage of the head and neck 6) Anatomy of the Para nasal sinuses in relation to the Vth cranial nerve. 7) General considerations of the structure and function of the brain, brief considerations of V, VII, XI, XII, cranial nerves and autonomic nervous system of the head and neck. 8) The salivary glands, Pharynx, Larynx Trachea, Oesophagus 9) Functional Anatomy of masticatory muscles, Deglutition, speech, respiration, and circulation, teeth eruption, morphology, occlusion and function. 10) Myofacial pain dysfunction syndrome.
2	GROWTH & DEVELOPMENT	<ol style="list-style-type: none"> 1) General physical growth, functional and anatomical aspects of the head, changes in craniofacial skeleton 2) Development, relationship between development of the dentition and facial growth
3	DENTAL ANATOMY	<ol style="list-style-type: none"> 1) Anatomy of primary and secondary dentition, concept of occlusion, mechanism of articulation, and masticatory function. 2) Detailed structural and functional study of the oral and Para oral tissue. 3) Normal occlusion, development of occlusion in deciduous mixed and permanent dentitions
4	HISTOLOGY	<ol style="list-style-type: none"> 1) Histology of enamel, dentin, Cementum, periodontal ligament and alveolar bone, pulpal anatomy, histology and biological consideration. 2) Salivary glands and Histology of epithelial tissues including glands.
5	APPLIED PHYSIOLOGY AND NUTRITION	<ol style="list-style-type: none"> 1) Mastication, deglutition, digestion and assimilation, Homeostasis, fluid and electrolyte balance 2) Blood composition, volume, function, blood groups and hemorrhage , Blood transfusion, circulation, Heart, Pulse, Blood pressure,

		<p>capillary and lymphatic circulation. Shock, respiration, control, anoxia, hypoxia, asphyxia, artificial respiration.</p> <p>3) Endocrine glands in particular reference to pituitary, parathyroid and thyroid glands and sex hormones.</p> <p>4) Role of calcium and Vit D in growth and development of teeth, bone and jaws.</p> <p>5) Role of Vit. A, C and B complex in oral mucosal and periodontal health.</p> <p>6) Physiology and function of the masticatory system.</p> <p>7) Speech mechanism, mastication, swallowing and deglutition mechanism,</p> <p>8) Salivary glands and Saliva</p>
6	APPLIED NUTRITION	<p>1) General principles, balanced diet, effect of dietary deficiencies and starvation,</p> <p>2) Diet, digestion, absorption, transportation and utilization & diet for elderly patients.</p>
7	APPLIED BIOCHEMISTRY	<p>1) General principles governing the various biological activities of the body, such as osmotic pressure, electrolytic dissociation, oxidation-reduction</p> <p>2) Carbohydrates, proteins, liquids and their metabolism,</p> <p>3) Enzymes, Vitamins, and minerals, Hormones, Blood,</p> <p>4) Metabolism of inorganic elements, Detoxification in the body & anti metabolites.</p>
8	APPLIED PHARMACOLOGY AND THERAPEUTICS	<p>1) Dosage and mode of administration of drugs.</p> <p>2) Action and fate of drugs in the body, Drug addiction, tolerance and hypersensitive reactions,</p> <p>3) Drugs acting on the central nervous system,</p> <p>4) General anesthetics hypnotics, analeptics and tranquilizers.</p> <p>5) Local anesthetics,</p> <p>6) Chemotherapeutics and antibiotics,</p> <p>7) Antitubercular and anti syphilitic drugs,</p> <p>8) Analgesics and antipyretics, Antiseptics, styptics,</p> <p>9) Sialogogues and antisialogogues,</p> <p>10) Haematinics, Cortisones, ACTH, insulin and other antidiabetics vitamins: A, D, B – complex group C, K etc.</p> <p>10) Chemotherapy and Radiotherapy. 11) Drug regime for antibiotic</p>

		prophylaxis and infectious endocarditis and drug therapy following dental surgical treatments like placement of implants, pre and peri prosthetic surgery
9	APPLIED PATHOLOGY	1) Inflammation, repair and degeneration, 2) Necrosis and gangrene, Circulatory disturbances, Ischaemia, hyperaemia, chronic venous congestion, oedema, thrombosis, embolism and infarction. 3) Infection and infective granulomas, Allergy and hypersensitive reactions, 4) Neoplasms; Classification of tumors, Carcinogenesis, characteristics of benign and malignant tumors, spread of tumors. 5) Applied histo pathology and clinical pathology
10	APPLIED MICROBIOLOGY	1) Immunity, knowledge of organisms commonly associated with diseases of the oral cavity (morphology cultural characteristics etc) of strepto, staphylo, 2) Clostridia group of organisms, 3) Spirochaetes, organisms of tuberculosis, leprosy, diphtheria, actinomycosis and moniliasis etc. 4) Virology,
11	INFECTION CONTROL	1) Sterilization and disinfection 2) Biomedical waste management 3) Biomedical waste management pertaining to dentistry
12	APPLIED ORAL PATHOLOGY	1) Developmental disturbances of oral and Para oral structures, Regressive changes of teeth, 2) Bacterial, viral and mycotic infections of the oral cavity. 3) Dental caries, diseases of pulp and periapical tissues 4) Physical and chemical injuries of the oral cavity, oral manifestations of metabolic and endocrine disturbances 5) Diseases of the blood and blood forming organism in relation to the oral cavity 6) Periodontal diseases, 7) Diseases of the skin, 8) nerves and muscles in relation to the Oral cavity
13	APPLIED SURGERY & ANESTHESIA	1) General principles of surgery 2) wound healing, incision wound care, hospital care 3) control of hemorrhage, electrolyte balance. 4) Common bandages, sutures, splints, shifting

		of critically ill patients, prophylactic therapy, bone surgeries, grafts, etc 5) surgical techniques, nursing assistance, anesthetic assistance. 6) Principles in speech therapy, surgical and radiological craniofacial oncology, 7) applied surgical ENT and ophthalmology
14	APPLIED MEDICINE	1) Systemic diseases and (its) their influence on general health and oral and dental health. 2) Medical emergencies like syncope, hyperventilation, angina, seizure, asthma and allergy/anaphylaxis in the dental offices – Prevention, preparation, medico legal consideration 3) unconsciousness, respiratory distress, altered consciousness, seizures, drug related emergencies 4) chest pain, cardiac arrest, premedication, prophylaxis and management of ambulatory patients, resuscitation, applied psychiatry, child, adult and senior citizens.

RESEARCH METHODOLOGY

S NO	TOPIC	LEARNING OBJECTIVES
1	RESEARCH METHODOLOGY	1) Research and types 2) Levels of Scientific evidence 3) Types of studies 4) Sampling
2	BIOSTATISTICS	1) Characteristics and limitations of statistics 2) planning of statistical experiments, sampling, collection, classification and presentation of data (Tables, graphs, pictograms etc) 3) Analysis of data, parametric and non parametric tests

BOOKS:

1. Jatin shah's : Head and neck surgery
2. A. Orthognathic surgery Posnick Vol I
B. Orthognathic surgery Posnick Vol II
3. Bone grafting in oral implant: Fedrico

4. Mastering rhinoplasty: Daniel
5. Anesthesiologist manual of surgical procedure: Jaffe
6. Management of complications in oral and maxillofacial surgery: Millorro
7. Oral and maxillofacial infections: Topazain
8. A. Textbook of maxillofacial injuries- Vol I: Rowe and William
B. Textbook of maxillofacial injuries- Vol II: Rowe and William
10. A. Craniofacial and maxillofacial surgery in children and young adults Vol I:
Jeffery c Posnick
B. Craniofacial and maxillofacial surgery in children and young adults Vol II:
Jeffery c Posnick
11. Surgical approach to the facial skeleton : Edward Ellis-III
12. Facial flap surgery: Glem goldmann
13. Reconstructive facial plastic surgery: Hilko Weerda
14. Anaesthesia for oral and maxillofacial surgery: Ian Shaw
15. Controversies in management of salivary gland diseases: Mark Mcgurg
16. Cleft lip and palate primary repair: Bing Shi
19. Handbook of osteology: Nafis Ahmed Faruqi
20. Head and neck cancer- a multi disciplinary approach- Harrison
21. Operative oral and maxillofacial surgery: Ord Brennan
22. Complications in oral and maxillofacial surgery: Kaban
23. A. Head and neck imaging Vol I: Son Curtin
B. Head and neck imaging Vol II: Son Curtin
24. Minimally invasive maxillofacial surgery: Maria, Leonard Kaban
25. Craniofacial reconstructive and corrective bone surgery: Greenberg
26. Maxillofacial trauma and aesthetic facial reconstructive: Ward Boom
27. Atlas of operative maxillofacial trauma surgery: Micheal Perry
28. Distraction osteogenesis of facial skeleton: Bell Guerrero
29. A. Oral and maxillofacial surgery: Fonseca Vol-II
B. Oral and maxillofacial surgery: Fonseca Vol III
32. Oral and maxillofacial surgery: Anderson and Kahnberg
33. Rigid fixation of cranio maxillofacial skeleton: Yaremonuk
34. Baker's local flaps in facial reconstruction: Baker
35. Manual of internal fixation: Muller
36. Multidisciplinary head and neck reconstruction: Urken
37. Bone grafting techniques for maxillary implants: Karl , Eric, Kahnberg
38. Contemporary oral and maxillofacial surgery: Hupp and Ellis
39. Contemporary implant dentistry : Misch
40. Ferraro's fundamentals of maxillofacial surgery: Taum, Patel, Buchmann
41. Internal fixation of mandible: Speisor
42. Textbook of advance oral and maxillofacial surgery: Mohd. Hosiem
43. Principles oral and maxillofacial surgery: Moore
44. Atlas of oral and maxillofacial surgery : Keith