

SYLLABUS

ORAL & MAXILLOFACIAL SURGERY

a) AIM

To produce a graduate who is competent in performing extraction of teeth and minor surgeries under both local and general anaesthesia, prevent and manage related complications, acquire knowledge regarding aseptic procedures, have reasonable understanding of management of infectious patients and prevention of cross infections, learn about BLS, acquire a reasonable knowledge and understanding of the various diseases, injuries, infections occurring in the Oral & Maxillofacial region and offer solutions to such of those common conditions and has an exposure in to the in-patient management of maxillofacial problems and also to acquire reasonable knowledge regarding the surgical principals involved in implant placement and be able to communicate properly and understand medico legal responsibilities

b) OBJECTIVES:

i. Knowledge & Understanding

At the end of the course and the clinical training the graduate is expected to –

- (1) Able to apply the knowledge gained in the preclinical subjects and related medical subjects like general surgery and general medicine in the management of patients with oral surgical problem.
- (2) Able to diagnose, manage and treat (understand the principles of treatment of) patients with oral surgical problems.
- (3) Knowledge of range of surgical treatments.
- (4) Ability to decide the requirement of a patient to have oral surgical specialist opinion or treatment.
- (5) Understand the principles of in-patient management.
- (6) Understand the principles of emergency management of maxillofacial injuries, BLS measures and the medico legal responsibilities and formalities.
- (7) Understanding of the management of major oral surgical procedures and principles involved in patient management.
- (8) Be able to decide the need for medical/ surgical consultations and the method of doing so.
- (9) Should know ethical issues and have communication ability.
- (10) Should know the common systemic and local diseases, drugs used and drug interactions
- (11) Death Certification & legal aspects of forensic medicine

ii. Skills:

A graduate should have acquired the skill to:

(1) Examine any patient with an oral surgical problem in an orderly manner.

- (2) Be able to understand requisition of various clinical and laboratory investigations and is capable of formulating differential diagnosis.
- (3) Should be competent in the extraction of teeth under both local and general anesthesia.
- (4) Should be able to carry out certain minor oral surgical procedures under L.A. simple impactions, draining of abscesses, simple dental wiring, biopsies etc.
- (5) Ability to assess, prevent and manage various complications during and after surgery.
- (6) Able to provide primary care and manage medical emergencies in the dental office.
- (7) Understanding of the management of major oral surgical problems and principles involved in inpatient management.
- (8) Should be competent in measures necessary for homeostasis and wound closures.

c) THEORY: 70 HOURS (III Yr. 26 hrs, Final Yr. Part I. 20 hrs. Part II. 30 hrs.)

Sl. No.	Topics	Description	Hours
Topics for III Year			
1.	Introduction	Definition, scope, aims and objectives. Diagnosis in oral surgery: History taking, Clinical examination, Investigations. Principles of infection control and cross-infection control with particular reference to HIV/AIDS and Hepatitis.	1
2.	Principles of Oral Surgery	1) Asepsis: Definition Measures to prevent introduction of infection during Surgery. Preparation of the patient, Measures to be taken by operator, Sterilization of instruments - various methods of sterilization etc, Principles and need for cleaning of infected/ used instruments prior to re sterilization Surgery set up. 2) Painless Surgery:	4

		<p>Pre- anesthetic considerations</p> <p>Pre-medication: purpose, drugs used</p> <p>Anesthetic considerations a) Local b)</p> <p>Local with IV sedations</p> <p>Use of general anesthetic</p> <p>3) Access:</p> <p>Intra-oral: Mucoperiosteal flaps, principles, commonly used intraoral incisions.</p> <p>Bone Removal: Methods of bone removal. Use of Burs: Advantages & precautions Bone cutting instruments: Principles of using chisel & osteotome.</p> <p>Extra-oral. Skin <i>incisions - principles, various extra-oral incision to expose facial skeleton.</i> a) Submandibular b) Pre auricular Incision for TMJ, Access to maxilla & orbit , Bi coronal incision</p> <p>4) Control of hemorrhage during surgery</p> <p>Normal Haemostasis</p> <p>Local measures available to control bleeding</p> <p>Hypotensive anaesthesia etc.</p> <p>5) Drainage & Debridement</p> <p>Purpose of drainage in surgical wounds</p> <p>Types of drains used</p> <p>Debridement: purpose, soft tissue & bone debridement.</p> <p>6) Closure of wounds</p> <p>Type wounds, Classification of wounds</p> <p>Suturing: Principles</p> <p>Suture material: Classification, ideal requirements</p> <p>Body response and resorbability of</p>	
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		<p>various materials etc.</p> <p>7) Post operative care</p> <p>Post operative instructions</p> <p>Physiology of cold and heat in the control of pain and swelling</p> <p>Analgesics and anti-inflammatory drugs in the control of pain and swelling</p> <p>Control of infection – antibiotics, principles of antibiotic therapy, prevention of antibiotic abuse</p> <p>Long term post operative follow up - significance.</p>	
3.	Local Anaesthesia	<p>Introduction and Neurophysiology</p> <p>Concept of LA</p> <p>Classification of local anesthetic agents</p> <p>Ideal requirements, Mechanism of action, Armamentarium required</p> <p>Types of local anaesthesia</p> <p>Use of vaso constrictors in local anesthetic solution</p> <p>-Advantages, contra-indications, Various vaso constrictors used.</p> <p>Anaesthesia of the mandible -Pterygomandibular space - boundaries, contents etc. Intra oral and extra oral techniques of Inferior Alveolar Nerve Block, Mandibular Nerve Block, Mental Nerve Block, Infiltrations, etc.</p> <p>Anaesthesia of Maxilla – Infiltrations, Infra - orbital nerve block, Posterior superior alveolar nerve block, Infiltrations, Maxillary nerve block – Intra oral and extra oral Techniques</p> <p>Complications of local anaesthesia- local and systemic</p> <p>Disposal of sharp instruments</p>	5

4.	General Anaesthesia	<p>Concept of general anaesthesia.</p> <p>Indications of general anaesthesia in dentistry.</p> <p>Pre-anesthetic evaluation of the patient.</p> <p>Pre-anesthetic medication - advantages, drugs used.</p> <p>Conscious sedation</p> <p>Commonly used anesthetic <i>agents</i>.</p> <p>Complication during and after G.A.</p> <p>I.V. sedation with Diazepam and Midazolam.</p> <p>Indications, mode of action, technique etc.</p> <p>Cardiopulmonary resuscitation</p> <p>Use of oxygen and emergency drugs.</p> <p>Tracheostomy.</p>	2
5.	Exodontia	<p>General considerations</p> <p>Ideal Extraction.</p> <p>Indications/ contra indications for extraction of teeth</p> <p>Extractions in medically compromised patients.</p> <p>Methods of extraction</p> <p>Forceps or intra-alveolar or closed method.</p> <p>Principles, types of movement, force, role of left hand etc.</p> <p>Trans-alveolar, surgical or open method</p> <p>Indications, surgical procedure.</p> <p>Dental elevators, uses, classification, principles in the use of elevators, commonly used elevators.</p> <p>Armamentarium, Complications</p> <p>Complications during exodontia Common to both maxilla and mandible.</p> <p>Post-operative complications</p> <p>Prevention and management of complications.</p>	4
6.	Medical Emergencies in dental practice	<p>Primary care of medical emergencies in dental practice</p> <p>(a) Cardio vascular (b) Respiratory (c) Endocrine</p>	3

		(d) Anaphylactic reaction (e) Epilepsy Basic Life Support	
7.	Emergency drugs & Intra muscular and I.V. Injections	Emergency drugs required in a dental clinic Applied anatomy. Sites for intra muscular and intra venous injections, techniques etc.	1
8.	Death Certification & legal aspects of Forensic medicine.(classes to be handled by faculty from the department of forensic medicine of a recognized medical college)*	Legal procedure and courts	1
		Medicolegal Autopsy, Objective, Procedure - Exhumation	2
		Sudden and unexpected death	1
		Forensic traumatology -Mechanical injuries, Medicolegal aspect of injury, Head injury, Transportation injuries	1
		Dental investigation in mass disaster incidents	1
Topics for Final year (Part I)			
9.	Impacted teeth	<p>i. Incidence, definition, etiology.</p> <p>ii. Impacted mandibular third molar Classification, reasons for removal Assessment - both clinical & radiological. Armamentarium and surgical procedures for removal. Complications during and after removal, its prevention and management.</p> <p>iii. Maxillary third molar, Indications for removal, classification, Armamentarium and surgical procedure for removal, Complications during and after removal, its prevention and management.</p> <p>iv. Impacted maxillary canine. Reasons for canine impaction, indications for removal, Methods of management, Localization, labial and palatal approaches, Complications during and</p>	4

		after removal, its prevention and management Surgical exposure, Transplantation	
10.	Neurological Diseases	i. Trigeminal neuralgia - definition, etiology, clinical features and methods of management including medical and surgical. ii. Facial paralysis - etiology, clinical features. iii. Nerve injuries - Classification, clinical features and management, Nerve Grafting -Neuropathy etc.	3
11.	Implants	Concept of osseointegration, History of implants their design & surface characteristics. Knowledge of various types of implants, Bone biology, Morphology, Classification of bone and its relevance to implant placement. Bone augmentation materials. Soft tissue considerations in implant dentistry. Surgical procedure to place implants.	2
12.	Diseases of the maxillary sinus	Surgical anatomy and development of the sinus. Sinusitis both acute and chronic Surgical approach of sinus - Caldwell-Luc procedure, Knowledge of FESS, Removal of root from the sinus. Oro-antral fistula and communications- etiology, clinical features and surgical methods for closure.	2
13.	Cysts of the mouth and jaws	Definition, classification, pathogenesis. Diagnosis - Clinical features, radiological, FNAC, use of contrast media and histopathology. Management - types of surgical procedures. Rationale of the techniques, indications, contraindications, procedures, complications etc.	4
14.	Jaw deformities	Basic forms - Prognathism, Retrognathism and open bite. Reasons for correction.	3

		<p>Diagnosis and treatment planning</p> <p>Outline of surgical methods carried out on mandible and maxilla-subapical, body, sagittal split osteotomy, genioplasty, anterior maxillary Osteotomy, Le fort I osteotomy</p> <p>Role of distraction osteogenesis in correction of jaw deformities</p>	
15.	Pre-prosthetic Surgery	<p>Definition</p> <p>Classification of procedures</p> <p>Corrective procedures: Alveoloplasty, Reduction of maxillary tuberosities, Frenectomies and removal of tori.</p> <p>Ridge extension or Sulcus extension procedures, Indications and various surgical procedures</p> <p>Ridge augmentation and reconstruction.</p> <p>Indications, use of bone grafts, hydroxyapatite etc</p>	2
Topics for Final year (Part II)			
16.	Cleft Lip and Palate	<p>Etiology of the clefts, incidence, classification</p> <p>Role of dental surgeon/ maxillofacial surgeon in the cleft team.</p> <p>Outline of the closure procedures,</p>	1
17.	Infections of the Oral cavity	<p>Introduction, surgical anatomy of the superficial and deep fasciae of head and neck</p> <p>Factors responsible for infection, pathogenicity, virulence</p> <p>Dento-alveolar abscess - aetiology, clinical features and management.</p> <p>Spread of odontogenic infections through various facial spaces and its management</p> <p>Ludwig's angina - definition, aetiology, clinical features, management and complications</p> <p>Course of odontogenic infections</p>	6
18.	Fungal Infections of head and neck	<p>Candidiasis, Actinomycosis, Coccidioidmycosis, Rhinosporidosis,</p>	1

	region	Antifungal agents	
19.	Osteomyelitis of the jaws	Definition, etiology, pre-disposing factors, classification, clinical features and management.	1
20.	Carcinoma of the oral cavity	Lymphatic Spread. TNM classification, Staging. Biopsy-types, filling of Histopathology request form Outline of management of Squamous Cell Carcinoma: surgery, radiation and chemotherapy Role of dental surgeons in the prevention and early detection of oral cancer.	2
21.	Osteoradionecrosis -	Definition, etiology, theories, pre-disposing factors, classification, clinical features and management.	1
22.	Maxillofacial Traumatology	Emergency management in maxillofacial trauma General considerations, types of fractures, aetiology, clinical features and general principles of management. Mandibular fractures - Applied anatomy, classification. Diagnosis - Clinical and radiological features, Management - Reduction -closed and open Fixation and immobilization methods outline of rigid and semi-rigid internal fixation Fractures of the condyle - etiology, classification, clinical features, principles of management Fractures of the middle third of the face. Definition of the mid face, applied surgical anatomy, classification, clinical features and outline of management. Alveolar fractures - methods of management Fractures of the Zygomatic complex and orbit. Classification, clinical features, indications for treatment, various methods of reduction and fixation	7

		<p>Faciomaxillary Injuries in Children</p> <p>Complications of fractures - delayed union, non-union and malunion.</p>	
23.	Salivary gland diseases	<p>Surgical Anatomy of Minor and Major salivary glands</p> <p>Sialography, contrast media, procedure.</p> <p>Inflammatory conditions of the salivary glands</p> <p>Sialolithiasis- Sub mandibular duct and gland , parotid duct and gland ,Clinical features, management, Intraoral and extra oral Sialolithotomy.</p> <p>Salivary fistulae, sialocoele</p> <p>Autoimmune diseases of the salivary glands, diagnosis management</p> <p>Common tumours of salivary glands like Pleomorphic adenoma including minor salivary glands.</p>	3
24.	Tumors of the Oral cavity	<p>General considerations, surgical principles</p> <p>Non odontogenic benign tumours occurring in oral cavity - fibroma, papilloma, lipoma, ossifying fibroma, myxoma etc.</p> <p>Odontogenic tumors: both benign and malignant.</p> <p>Ameloblastoma - Clinical features, radiological appearance and methods of management.</p> <p>Osteogenic tumours of the faciomaxiliary region.</p>	4
25.	Disorders of T.M. Joint	<p>Applied surgical anatomy of the joint.</p> <p>Development of the TMJ</p> <p>Surgical approaches to TM.J</p> <p>Radiological investigations</p> <p>Hypermobilty of TMJ; Dislocation - Types, aetiology, clinical features and management.</p> <p>Hypomobility of TMJ; Classification, Ankylosis - Definition, aetiology, clinical features and management</p>	4

		Myo-facial pain dysfunction syndrome, etiology, clinical features, management- Non surgical and surgical. Internal derangement of the joint. Inflammatory Diseases of T.M. Joint. Arthroscopy	
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d) CLINICAL AND ACADEMIC REQUIREMENTS

- i.* Case Taking: Detailed clinical examinations, investigations and diagnosis – 10 nos.
- ii.* Dental extractions under local anesthesia – 180 nos.
- iii.* Suturing of extraction wound -5 nos.
- iv.* Incision and drainage – 3 nos.
- v.* Arch bar wiring, eyelet wiring and intermaxillary fixation on plaster or acrylic models- 1 each
- vi.* IV/ IM injection technique on patients- 5 nos. each
- vii.* Wound dressing – 5 nos.
- viii.* Observing minor surgery done by staff member- 5 nos.
- ix.* Surgical Assistance of minor surgeries- 5 nos.
- x.* Observation of major surgeries in Operation Theatre- 3 nos.
- xi.* Observation of surgical procedures performed in casualty– 5 nos.
- xii.* Training in handling medical emergencies. CPR and basic life support
- xiii.* Seminars: 6 nos. Two in the third year, Two in the fourth year and Two in the final year
A work record should be maintained by all students detailing each of the clinical and academic requirements duly signed by the teacher in charge and should be submitted at the time of examination after due certification from the head of the department.

e) CLINICAL REQUIREMENTS YEAR WISE SPILT UP:

Sl. No.	Topic	Procedures in III Year	Quota: Must do
1	Case Taking	Detailed clinical examinations, investigations and diagnosis	2 cases
2	Dental Extraction	Extraction of anterior and mobile teeth under LA : Infiltration only	30 cases
3	Seminars	Seminars on basic subjects, local anesthesia, investigative procedures,	2 no.

		exodontia etc	
	Injection	IV/ IM injection technique on patients-	5nos.each
4	Observation	Observing minor surgery under LA done by staff member	2 cases
Procedures in Final year (Part I)			
1	Case Taking	Detailed clinical examinations, investigations and diagnosis	3 cases
2	Dental Extraction	Extraction of anterior and posterior teeth under LA : Infiltration and blocks	90 cases
3	Suturing	Suturing of extraction wound	5 no.
4	Seminars	Seminars on oral surgery subjects, cross contamination and infection, impactions, medically compromised patients, medical emergencies etc.	2 no.
5	Observation	Observing minor surgery under LA done by staff member	3 cases
6	Assistance	Assistance of minor surgery under LA done by staff member	2 cases
7	Observation	Observation of cases managed in the casualty	2 cases
8	Skill development	Wiring procedures in models	3 nos.
Procedures in Final year (Part II)			
1	Case Taking	Detailed clinical examinations, investigations and diagnosis	5 cases
2	Dental Extraction	Extraction of anterior and posterior teeth under LA : Infiltration and blocks	60cases
3	Seminars	Seminars on oral surgery subjects like TMJ, Tumors, Maxillofacial injuries, Infections, Salivary Gland diseases and Medico-legal considerations	2 no.
4	Observation	Observation of major surgery under GA do in the OT	3 cases
5	Assistance	Assistance of minor surgery under LA done	3cases

		by staff member	
6	Procedure	Incision and drainage	3
7	Procedure	Wound dressing	5
8	Observation	Observation of cases managed in the casualty	3 cases



f) SCHEME OF EXAMINATION

Distribution of Topics and Types of Questions for University Written Examination:

Contents	Types of Questions and Distribution of Marks	Total Marks
One Question from Local Anaesthesia One Question from Oral Surgery	Structured Essays 2x 10marks	20
Two Questions from Oral Surgery, One Question from Local Anaesthesia, , One Question from General Anaesthesia	Short Notes 4 x 5marks	20
Questions from any of the Oral & Maxillofacial Surgery topics.(at least one question from management of medical emergencies) One question from Death Certification & legal aspects of Forensic medicine.	Brief Notes 10x3marks	30
	Total	70

v. Theory

University Written	70Marks
Viva Voce	20Marks
Internal Assessment	10 Marks

vi. Clinical:

University Clinical Examination:	80 Marks
Extraction of one firm tooth (Maxillary/ Mandibular)	
Case History	20 Marks
Local Anaesthesia technique	25 Marks
Extraction of firm tooth & patient management	25 Marks
Clinical Work Record & Seminar	10 Marks
Internal Assessment:	20 Marks

Grand Total 200Marks