

Curriculum

M.Ch HEAD AND NECK SURGERY

Core curriculum summary

The core curriculum includes didactic lectures and seminars on basic tumor biology, pathology, anatomy, molecular biology and genetics, clinical research methods, radiation oncology, medical oncology and different aspects of head and neck oncology and general head and neck surgery including benign pathology.

- Attend weekly interdisciplinary Tumor Board
- Clinical and surgical training as per the log book requirements
- Elective rotations (one to two months) with radiation oncology, medical oncology, pathology, ENT, neurosurgery, speech and swallowing therapy, pain and palliation and prosthetics.
- Completion of at least one research project that result in peer-reviewed publications
- Attendance in national oncology conferences once a year with paper presentations

Details of the core curriculum

Didactic lectures and seminars

Year 1 (Semester – I)

Part A

- Molecular cell biology of cancer
- Mechanism of Carcinogenesis
- Targeted therapy
- Gene therapy in HNSCC
- Clinical Research Methods
 - Developing hypothesis and planning research project
 - Designing a clinical research project
 - Data collection and monitoring
- Ethics in biomedical research

Part B

- Applied head and neck anatomy
- Principles of radiation therapy.
- Principles of chemotherapy
- Head and neck radiology

Year 1- Semester – II

Part A

- Lip and oral cavity
- Benign cysts and tumors of the jaw
- Management of Mandible
- Oropharynx

Part B

- Hypopharynx
- Supraglottic Larynx
- Glottic Larynx
- Subglottis and trachea
- Basic plastic surgery principles

Year 2: Semester III

Part A

- Salivary gland
- Paranasal sinus
- Parapharyngeal space
- Nasopharynx

Part B

- Management of Neck
- Thyroid
- Parathyroid
- Occult Primary

Year 2: Semester IV

Part A

- Nutritional support
- Anterior skull base tumors
- Lateral skull base tumors
- Management of cancer pain
- Specialized care of the terminally ill

Part B

- Lips reconstruction
- Oral cavity reconstruction
- Mandible reconstruction
- Sarcomas of head and neck

Year 3 : Semester V

Part A

- Reconstruction of soft tissue defects of face
- Nose reconstruction
- Pharynx reconstruction
- Skull base reconstruction

Part B

- Speech and swallowing therapy
- Tracheo-esophageal prosthesis
- Prosthetic rehabilitation
- Pediatric tumors of head and neck

Year 3 Semester VI

Part A

- Glomus tumors
- Acoustic schwannoma
- Chemo prevention of HNSCC
- Epidemiology of cancer

Part B

- Skin tumors of head and neck
- Melanoma of head and neck
- Lymphoma of head and neck
- Granulomatous and lymphoproliferative disease of head and neck

Detailed structure of the 3 year training programme

Year one

Head and Neck Surgery	-	8 months
Rotation postings to		
ENT/Surgical Oncology	-	1 month
Radiation Oncology	-	1 month
Medical Oncology	-	1 month
Pain and Palliation	-	1 month

Year two

Research	1 month
Reconstructive surgery	6 months
Head and neck surgery	2 months (outside centers)
	3 months

Apart from the one month spent in the research lab which is intended to give the trainee preliminary acquaintance with basic sciences research methodology and allowing them to choose a project of their own, one day in the week shall be set apart each week for research for each trainee.

Year Three

Head and Neck Surgery	6 months
Head and neck Surgery/ Reconstructive surgery	6 months

One day each week will be set apart for research/academics and publications for each trainee

Hands on Training for MCh Head and Neck Surgery Trainees

During the three year training period it is envisaged that the trainees will have adequate exposure in patient evaluation and decision making, medical and surgical management of the cases, immediate post operative care and management of complications. Apart from these the trainees will be rotating to other ancillary units to get hands on training in relevant areas. They will also undertake intradepartmental audit activities and participate in clinical and basic science research projects. The details of the training will be listed below.

Patient evaluation and decision making

The areas where trainees will get hands on training include

- a) out patient clinics
- b) weekly tumor board sessions

The trainees will be seeing all the new and follow up patients during the clinic posting. They will be always supervised by a senior qualified teacher and they will participate in discussions regarding the clinical problem and management plans. There will be a weekly tumor board session. Towards the end of their training, i.e. the third year, the trainees will be encouraged to arrive at independent decisions, critically evaluated and supervised by the teachers.

Surgical training

The department has a very good surgical volume which includes the whole spectrum of plastic surgery. The trainees will be able to observe, assist and perform under supervision all these procedures in a graded manner. For this a log book will have to be maintained and at end of each semester of 6 months the trainee will sit with the consultants and the log book will be evaluated to see for the deficiencies. The minimum expected log book activity is given as below

Surgical training requirements

	(A=assisted PA=performed with assistance P=performed)			
	Year 1	year2	year3	total
	A-PA-P	A-PA-P	A-PA-P	A-PA-P
Larynx				
Conservative procedures				
Open	1-0-0	0-1 -0	0-0-1	1-1-1
Endoscopic				

Near total Laryngectomy	2-0-0	0-1-0	0-0-1	2-1-1
Total Laryngectomy	2-0-0	0-2-1	0-0-3	2-2-4
Total laryngopharyngectomy	2-0-0	0-2-0	0-0-2	2-2-2
TEP-				
Primary	2-0-0	0-2-0	0-0-2	2-2-2
Secondary	2-0-0	0-2-0	0-0-1	2-2-1
Maxilla				
Partial maxillectomy	2-0-0	0-2-0	0-0-2	2-2-2
Total maxillectomy	2-0-0	0-2-0	0-0-2	2-2-2
Orbital exenteration	1-0-0	0-1-0	0-0-1	1-1-1
Oral cavity/Oropharynx				
Lip lesions	2-0-0	0-2-0	0-0-2	2-2-2
Access mandibulotomies	4-0-0	0-4-0	0-0-4	4-4-4
Marginal resections	2-0-0	0-2-0	0-0-4	2-2-4
Segmental resections	2-0-0	0-2-0	0-0-4	2-2-4
Tongue/ fom / cheek resections	3-0-0	0-3-0	0-0-4	3-3-4
Neck				
Sentinal node biopsies	2-0-0	0-2-2	0-0-4	2-2-6
Selective dissections	2-1-0	0-1-4	0-0-6	2-2-10
Comprehensive	2-0-0	0-2-0	0-0-4	2-2-4
Skull base/ craniofacial				
Anterior	2-0-0	0-2-0	0-0-2	2-2-2
Thyroid				
Partial	4-0-0	0-4-0	0-0-4	4-4-4
Total	4-0-0	0-4-0	0-0-4	4-4-4
Parotid				
Superficial		4-0-0	0-4-0	0-0-4
4-4				4-
Total	2-0-0	0-2-0	0-0-2	2-2-2
Reconstructions				
Minor flaps	2-0-0	0-2-0	0-0-2	2-2-2
Forehead flap	1-0-0	0-1-0	0-0-1	1-1-1
Pec major	2-2-0	0-2-2	0-0-2	2-4-4
D-P flap	1-0-0	0-1-0	0-0-1	1-1-1
Others (LD/Trap)	2-0-0	0-2-0	0-0-2	2-2-2
Free flaps raising				
Fibula	4-0-0	0-4-0	0-0-2	4-4-2
RFF	4-0-0	0-4-0	0-0-2	4-4-2
Lat arm	4-0-0	0-4-0	0-0-2	4-4-2
DCIA	2-0-0	0-2-0	0-0-1	2-2-1
Rectus	4-0-0	0-4-0	0-0-2	4-4-2
Jejunum	1-0-0	1-1-0	0-1-0	2-2-0
Stomach pull up	1-0-0	1-1-0	0-1-0	2-2-0

Free flaps					
Recipient vessel					
Preparation	4-0-0	0-4-1	0-0-3	4-4-4	
Anastamosis Vein	4-0-0	0-4-1	0-0-3	4-4-4	
Anastamosis artery	4-0-0	0-4-1	0-0-3	4-4-4	
Nerve grafts	2-0-0	0-2-0	0-0-2	2-2-2	
Other procedures					
Jejunostomy/ Gastrostostomy		2-0-0	0-2-0	0-0-2	2-
2-2					
Central lines	2-2-0	0-2-2	0-0-2	2-4-4	
Stomoplasty	1-0-0	0-1-0	0-0-1	1-1	
Laser use	2-0-0	0-2-0	0-0-2	2-2-2	
Skin grafts	2-2-0	0-2-2	0-0-2	2-4-4	

Compulsory Academic activities

- Topic presentation in department - 12 in three years
- Journal club reviews - 12 in three years
- Attendance /Presentation of papers in National head and neck meetings
Once every year
- Publications - Two in three years
- Research activities - participation in one laboratory research
project and one clinical trial

Tumor board meetings once a week.

All trainees will be required to maintain a log book of cases worked up, assisted, performed, and planned RT, and administered Chemotherapy and palliative care cases attended to. Also the activity records in terms of the compulsory academic activities have to be maintained.

Evaluations

- A. Internal assessment - 6 monthly theory and clinical evaluations
- B. Final examination

Theory papers – Four papers

- a) Basic sciences and applied anatomy
- b) General Head and Neck surgery, including benign pathology

- c) Head and neck Oncology, including radiotherapy and chemotherapy
- d) Recent advances

Practical and Viva

Model question papers

MCh Head & Neck Surgery

Paper-I

Marks :100

Time: 3 Hrs

Answer all questions
Draw labelled diagrams when necessary

Part A

- 1) Discuss biologic basis for interruption of EGFR pathway in head and neck cancer and clinical evidence of its utility. (20 marks)
- 2) Discuss the clinical anatomy of Infratemporal fossa. Describe the various approaches to the Infratemporal fossa. (20 marks)

Part B

(10 marks each)

Write briefly on:-

- 1) Targeted VEGF in Head and Neck cancer
- 2) Anatomical spaces and pattern of spread of laryngeal tumour
- 3) Surgical tumor margins, relevance and classification
- 4) Role of PET-CT in head and neck cancers
- 5) Discuss the Pathogenesis of osteo radionecrosis
- 6) Second primary cancer in head and neck

MCh Head & Neck Surgery

Paper II

Marks :100

Time: 3 Hrs

Answer all questions
Draw labelled diagrams when necessary

Part-A

- 1) Discuss the pros and cons for lobectomy and total thyroidectomy for differentiated thyroid carcinoma
(20 marks)
- 2) Mandibular reconstruction- Discuss indications with their justifications, methods with their relative merits and demerits
(20 marks)

Part -B

(10 marks each)

- 3) Radiologic features of benign mandibular disease
- 4) Pathology of parotid tumors
- 5) Pain management in head and neck cancer
- 6) Pathogenesis of osteoradionecrosis on mandible
- 7) TEP following total laryngectomy
- 8) Glomus jugulare classification and clinical features

MCh Head & Neck Surgery Examination

Paper-III

Marks :100

Time: 3 Hrs

Answer all questions
Draw labelled diagrams when necessary

Part A

- 1) Impact of introduction of chemotherapy in the multi disciplinary management of head and neck cancer. Discuss the benefits and drawbacks (20 marks)
- 2) Discuss the evaluation and management of neck in head and neck squamous cell carcinoma (20 marks)

Part B

(10 marks each)

- 1) Discuss the localization studies in Parathyroid adenoma
- 2) Discuss the merits and demerits of laser surgery Vs radiotherapy for T1 glottic carcinoma
- 3) Management of orbit in PNS tumor
- 4) IMRT technique in NPC
- 5) Partial laryngectomy procedures
- 6) Role of HPV in head and neck malignancies

MCh Head & Neck Surgery

Paper IV

Marks :100

Time: 3 Hrs

Answer all questions
Draw labelled diagrams when necessary

Part A

- 1) What are the principles of Osteointegration and its indications in Head and Neck reconstruction? (20 marks)
- 2) Robotic assisted surgery in head and neck cancers-Current evidence and principle of practice (20 marks)

Part B

(10 marks each)

- 1) Endoscopic assisted procedures in head and neck surgery
- 2) Role of image guided navigation in skull base tumors
- 3) Applications of stereotactic radio surgery
- 4) Stem cell in solid tumors
- 5) EGFR inhibitors
- 6) Super micro surgery

EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the student:

Name of the faculty / Observer:

Date:

Sl No.	Items of observation during Presentation	Poor 0	Below average 1	Average 2	Good 3	Very good 4
1	Completeness of history and findings					
2	Clarity of presentation					
3	Assessment of defect/ problem					
4	Treatment plan					
5	Steps in execution of the plan					
6	Ability to defend diagnosis and plan					
7	Knowledge of the current and past literature					
	Grand Total					

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the student:

Name of the faculty / Observer:

Date:

Sl No.	Items of observation during Presentation	Poor 0	Below average 1	Average 2	Good 3	Very good 4
1	Article chosen was					
2	Extent of understanding of scope & Objectives of the paper of the candidate					
3	Whether cross reference has been consulted					
4	Whether other relevant publications consulted					
5	Ability to respond to questions on the paper / subject					
6	Audio – Visual aids used					
7	Ability to defend the paper					
8	Clarity of presentation					
9	Any other observation					
	Total Score					

MODEL CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the student:

Name of the faculty / Observer:

Date

Sl No.	Items of observation during Presentation	Poor 0	Below average 1	Average 2	Good 3	Very good 4
1	Whether other relevant publications Consulted					
2	Whether cross references Have been consulted					
3	Completeness of the Preparation					
4	Clarity of Presentation					
5	Understanding the subject					
6	Ability to answer the questions					
7	Time Scheduling					
8	Appropriate use of Audio – Visual aids					
9	Over all Performance					
10	Any other Observation					
	Total Score					

MODEL CHECK-LIST FOR EVALUATION OF CLINICAL WORK IN WARD/OPD

Name of the student:

Name of the faculty / Observer:

Date

Sl No.	Items of observation during Presentation	Poor 0	Below average 1	Average 2	Good 3	Very good 4
1	Regularity of attendance					
2	Punctuality					
3	Interaction with Colleagues And Supporting staff					
4	Maintainence of case records					
5	Presentation of cases during rounds					
6	Investigations work up					
7	Bedside Manners					
8	Rapport with patients					
9	Counseling Patient's relatives for blood donation or Postmortem andCase follow up.					
10	Over all quality of clinical work					
	Total Score					

CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

Name of faculty / Observer:

Sl No.		Strong point	Weak point
1	Communication of the purpose of the talk		
2	Evokes audience interest in the subject		
3	The Introduction		
4	The sequence of ideas		
5	The use of practical examples and /or illustrations		
6	Speaking style (clear, monotonous, etc. specify)		
7	Attempts audience participation		
8	Summary of the main points at the end		
9	Ask questions		
10	Answer questions asked by the audience		
11	Rapport of the speaker with his audience		
12	Effectiveness of the talk		
13	Uses of AV aids appropriately		

LOG BOOK

Table 1: Academic activities attended

Name:

Admission year:

College:

Date	Type of activity Specify Seminar, Journal club, Presentation, UG teaching	Particulars

LOG BOOK

Table 2: Academic Presentations made by the students

Name:

Admission year:

College:

Date	Topic	Type of activity Specify Seminar, Journal club, Presentation, UG teaching

LOG BOOK

Table 3: Diagnostic and Operative procedures performed

Name:

Admission year:

College:

Date	Name	I D No.	Procedure	Category A, PA, P*

- A – Assisted a more senior surgeon
- PA – Performed procedure under the direct supervision of a senior surgeon
- PI - Performed independently