



AOMSI FELLOWSHIP PROGRAM

The pursuit of excellence in the field of Oral and Maxillofacial Surgery led to the initiation and continuation of fellowship programs post-training in Oral and Maxillofacial Surgery.

The Fellowship committee is constituted of the members of the Association of Oral and Maxillofacial Surgeons of India (AOMSI) in good standing with professional and academic insight. The committee includes members in the capacity of core members, advisory committee members, and fellowship directors. The AOMSI head office disburses the funding of the fellowship program. The decision to recognise new fellowship centres or discontinue programs is taken with the Head Office's consensus, particularly the President and Hon. General Secretary of the Association.

The role of the committee members, description of tenures, curriculum of the programs and entry and exit criteria for fellows and program recognition are described as follows.

1. Core Committee:

The core committee was formulated in 2015 to ensure the smooth unbiased functioning of the AOMSI fellowship program. The Secretary and President of AOMSI are the ex-officio members of the committee.

The core committee member should adhere to the guidelines and follow due diligence in assignment of the fellowship program to candidates and centre accreditation.

The number of members will be increased based on the need and the Chairman will take the consent of committee members before increasing and inviting new members.

The committee has bi-annual physical meetings. These meetings will be during the MIDCOMS and Annual Conference.

Details of committee members:

- | | |
|-------------------------------|----------|
| 1. Dr. Sanjeev Kumar | Chairman |
| 2. Dr. Ramdas Balakrishna | Member |
| 3. Dr. Dipesh Rao | Member |
| 4. Dr. Rajasekhar Gaddipati | Member |
| 5. Dr. Vijay Pillai | Member |
| 6. Dr. Nishant Upadhyay | Member |
| 7. Dr. Elavenil Panneerselvam | Member |



- | | |
|-----------------------------------|-------------------|
| 8. Dr. Bhagavandas Rai, President | Ex-officio member |
| 9. Dr. Girish Rao, Secretary | Ex-officio member |
| 10. Dr. Himanshu Soni | Invited Observer |

Tenure in the committee: Under normal circumstances, an inducted member would remain in the Core Committee for 5 years. The term can be extended for an additional year with the permission of the Chairman, the AOMSI President and Hon. Gen. Secretary. The Chairman, AOMSI President, Secretary and a member can terminate a member's membership in case of malice or lack of commitment.

Invited Observers : AOMSI members with academic and administrative inclination will be invited to the fellowship committee meeting as observers. After participating actively in two meetings, the observers can be inducted into the committee with the approval of other members. The observers should have at least 10 years of post MDS experience and should be either in active academics or should have done a fellowship in India or abroad. A maximum of three members from AOMSI community will be inducted as observers, one of which will be in the Oral Oncology panel each year, based on the need and subject to recommendation of the Core Committee members.

2. Chairperson of Fellowship Committee:

The Chairperson is to be appointed from among the fellowship committee members after serving a minimum of 2 years as a core committee member. They should have a complete understanding of the selection process and be available for the grievances of the fellowship candidates and the fellowship centre director. The role of the Chairman is to ensure the smooth functioning of the program and maintain the credibility of the AOMSI fellowship program. The Chairman will assign responsibilities to the members of the core committee and the concerned members will report to the Chairman of the committee.

The Chairman's term is two years, which can be extended for an additional year with the permission of the committee and the AOMSI President and Hon. Gen. Secretary. Two committee members can terminate the chair's role with the head office's consent in case of malice or lack of commitment.



3. Sub-Committees

A. **Review Board:** This board comprises senior members who have previously held high positions in the fellowship committee or the head office. The board members must also have at least 30 yrs. of post-MDS experience. (Both criteria mandatorily to be fulfilled). This board will periodically review Fellowship centres and their directors and take feedback from past fellows.

- | | |
|----------------------------|----------|
| a. Dr. Sanjeev Nair | Chairman |
| b. Dr. Vivek Vardhan Reddy | Member |
| c. Dr. Krishnamurthy B. | Member |
| d. Dr. Sanjeev Kumar | Member |

The Review Board will review the centres every 2 years or any centre which has not been reviewed for more than 2 yrs. Normally, board members will function for a duration of 5 yrs. The Review Board members will be special invitee for the fellowship committee meetings.

B. **Grievance Committee:** Any complaint with regard to fellowship program by the fellow or the directors will be addressed to the Grievance Committee. The members are:

- | | |
|-------------------------------|----------|
| a. Dr. Sanjeev Kumar | Chairman |
| b. Dr. Elavenil Panneerselvam | Member |
| c. Dr. Dipesh Rao | Member |
| d. Dr. Rajasekhar Gaddipati | Member |

Sexual Harassment or mental disturbances – Any complaints received by the Grievance Committee which falls under the category of sexual harassment or mental depression will be referred to **AOMSI POSH Committee**.

C. **Advisory Committee for Fellowship Programs:** AOMSI members who are subspecialty experts will form the advisory panel for the fellowship program. This panel will help build the curriculum, question bank for the entry and exit exams, conduct oral exams, and also help in teaching programs for the fellowship candidates. In addition, the advisory panel will help identify new centres fulfilling the criteria laid down by the committee and the head office and conduct a periodic



audit of the old centres. The Advisory Committee members can be special invitee for the fellowship committee meetings.

D. Selection Board: will consist of members of the Core Committee and Advisory Committee who will allot the candidates to the centres according to the selection criteria.

E. Oral Oncology Panel: The following are the current members who are responsible for co-ordinating with the Centre Directors for Oral Oncology fellowship. They are also responsible for smooth conduct of Entrance & Exit examination and supervision of academic programs for Oral Oncology.

- | | |
|-------------------------|----------------|
| a. Dr. Moni Kuriakose | Advisor |
| b. Dr. Vijay Pillai | Panel Chairman |
| c. Dr. Nishant Upadhyay | Member |

4. Fellowship Eligibility Criteria:

The applicant must be an AOMSI member. The eligible candidate should have a registrable degree of Masters in Oral and Maxillofacial Surgery before the joining the fellowship program. Also refer to guidelines for different fellowship programs (annexures) for specific requirements of each sub-specialty.

5. Entry Examination : The candidate must sit the entry examination conducted by Fellowship Committee, the dates of which will be announced every year on the AOMSI website. An examination fee of 500 rupees per candidate will be charged to cover the basic expenses of conducting the examination. The results of the written examination will be declared within a week of the examination. All successful candidates will be ranked as per the marks obtained. Thrice the number of seats available in each sub-specialty will be called for an interview with the Selection Board and subject directors prior to the AOMSI National conference.

To the written marks, the interview marks will be added to form the final merit list. It is strongly recommended that the selected candidates visit the centres of their choice to understand the working environment and meet the Director prior to attending the allotment process.



Any candidate already in-service/been selected for government service/ or serving a bond has to submit NOC from their current employee before joining the fellowship program.

6. Fellowship Allotment:

Letter of recommendation from MDS guide, Curriculum Vitae and the MDS logbook for the candidate will need to be assessed by the Directors to their satisfaction before seat allocation.

Selection and Rejection Criteria :

The director can change only one candidate during the interview process, and valid reason needs to be offered while skipping a candidate.

After seat allocation, a candidate may forfeit his/her seat within 10 days, after which the candidate has to abide by the tripartite agreement. However, the candidate will not be eligible to appear for the next year AOMSI fellowship examination.

7. Tripartite Agreement: A Tripartite agreement between the candidate, Fellowship Director and AOMSI will need to be signed prior to commencement of the fellowship program (Annexure). The candidate's eligibility will be revised periodically (every three months) to improve the scope of inclusion and to work in hospital settings.

A candidate not adhering to the code of conduct and work ethics laid down by the AOMSI and Centre Director will be asked to discontinue their fellowship with no further grant payment. In addition, the candidates are expected to maintain a daily log of their work and preferably have a research project during their fellowship completion. A standardized format for the logbook will be provide to the candidate which will have to be maintained, as it will be scrutinised during the exit examination.

8. Grant: A grant of Rs. 25000.00 per month will be provided to the candidate during the fellowship period. There is no provision for indulging in private practice during the duration of the fellowship. *Note: The effective grant for TMH, Mumbai is 19000 INR, as the candidate has to pay the institution 6000 INR per month.*

9. Biweekly academic activity : The candidate will have to compulsorily participate in study groups which will be co-ordinated by:



- a. Oncology Study Group- Dr. Vijay Pillai
- b. Orthognathic Study Group- Dr. Ramdas Balakrishna
- c. Trauma Study Group– Dr. Elavenil Panneerselvam
- d. Cleft Study Group- Dr. Dipesh Rao

10. The Exit examination: The exam format would comprise a written exam followed by a clinical examination and viva voce. The centre for the exit exam is decided based on the mutual discussion among program directors and convenience. It is preferable to have each centre be an exam centre in rotation. No travel allowance is payable to the candidates for travelling for the exam.

Theory paper: (3 hours). There would be 20 MCQs of 20 marks and 8 subjective questions of 10 marks each. There is no negative marking. **Total: 100 marks**

Practical exam would have one long case and 2 short cases followed by a theory viva.

1. Long case would be of 60 marks (30 Minutes)
2. Short cases of 40 marks each (15 minutes for each short case) **Total: 140 marks**

Theory Viva: 60 marks

Total: 300 marks

Candidates need to secure 50 % marks in theory and practicals separately to have passed the examination.

11. Fellowship Center:

The centre can be in a single unit or in multiple centres where the director is attached as a consultant and can permit training of the fellowship candidate. The director is expected to fulfil the guidelines set by the AOMSI head office and Fellowship committee. These guidelines will be periodically revised and amended to improve the standard of training and benefit both the centre and the candidate. In addition, the advisory board and the committee will review the curriculum for the fellowship and recommend teaching programs for the fellows.

The Program director is responsible for nurturing the young oral and maxillofacial surgeon, and will ensure he or she blossoms under the directors leadership abilities. The fellows are not assigned to the centres as duty doctors but as trainees who will benefit from the vast



experience of the mentor. The goal of a fellowship is to improve the standards of care and train future talents. **The Centre's facilities for fellowship program should be displayed in the AOMSI website.**

12. Proposal for new centres:

The head office will release a call for new fellowship centres. The letter shall be sent to all committee members with copies of the guidelines for the centre and curriculum. Interested experienced maxillofacial surgeons will have to reply to the "call for centre" and apply through the portal. The committee will then conduct a formal inspection of the centre to check if the director and centre can adhere to the guidelines and recommendations. **The chairman will appraise the Centre Director regarding the AOMSI guidelines and the minimum grant amount to be paid to the fellow for the duration of fellowship.**

All applications to start fellowship should be received before 30th June. The inspection will be completed within 15 days of receiving the application prior to the announcement of dates for the written examination.

An official mail will be sent to a member of AOMSI appointed by Chairman to inspect the centre. He should be in active teaching and preferably from a place near to the proposed centre. A copy of the mail will also be sent to the Centre Director regarding the inspection and the requirements of AOMSI.

Annexures:

Tripartite Agreement

Guidelines for sub-specialties

Guidelines for centres

Curriculum for Fellows including case expectation

Note :

Text in Black Colour – original draft of the fellowship committee instructions.

Text in Red Colour – Amendments and changes done after meetings



Annexure I

Tripartite Agreement



**TRIPARTITE AGREEMENT BETWEEN THE ASSOCIATION OF ORAL AND
MAXILLOFACIAL SURGEONS OF INDIA (AOMSI), DIRECTOR OF THE
FELLOWSHIP PROGRAM AND THE FELLOW CANDIDATE.**

THIS TRIPARTITE AGREEMENT is made on this.....day of 20
between,

1. AOMSI, Head office at Bengaluru, represented by its Hon. Gen. Secretary R/o-----
----- herein after called as First party,
2. The Director of the Fellowship Programme of AOMSI (Fellowship in Maxillofacial
Trauma, Fellowship in Orthognathic Surgery, Fellowship in Head & Neck Oncology
and Fellowship in Cleft & Craniofacial Surgery), Institute/Hospital located at -----
----- herein after called as Second party and,
- 3.The selected Fellow Candidate by AOMSI for the Programme, by name: -----
----- herein after called as Third party.

First party

Second Party

Third party



**TRIPARTITE AGREEMENT BETWEEN THE ASSOCIATION OF ORAL AND
MAXILLOFACIAL SURGEONS OF INDIA (AOMSI), DIRECTOR OF THE
FELLOWSHIP PROGRAM AND THE FELLOW CANDIDATE.**

IT IS HEREBY AGREED by and between the parties as follows:

- A) The First party is an Association involved in the academic activity, which aims to impart advanced knowledge and training in Maxillofacial Trauma Orthognathic surgery, Head & Neck Oncology & Cleft and Craniofaicial Surgery to improve skills and independently manage these problems at the end of the training. Since adequate exposure to the above-mentioned sub-specialties might be lacking in some of the teaching institutes imparting MDS degree, it was decided by AOMSI to start hands-on training program in the said sub-specialties.
- B) To achieve its aims and objectives AOMSI i.e. the first party has identified Institutions/Hospitals, having experienced faculty and fully equipped Department of Oral and Maxillofacial Surgery to be the training centres, which have performed good number of cases as per AOMSI fellowship guidelines. These centres are being supervised by the second party i.e. Directors of the fellowship program. The course curriculum prepared by the AOMSI for the fellowship program in the said sub-specialties must be strictly implemented by the second party.
- C) The third party is the fellow candidate who has completed his/her MDS program in a recognized institution (and not beyond 3 years of post MDS program) and has cleared the fellowship entrance examination in the said sub-specialties conducted by the first party.
- D) As per the guidelines set by AOMSI, the third party has been selected and will be given training in the respective field i.e. sub-specialty in the premises of second part (i.e. Institution/Hospital) for a period of 12 months, 18 months or 24 months, depending on the fellowship program.
- E) During the course of training the second party shall give a grant of Rs.25,000/- (Rupees Twenty five thousand only) per month to the third party (i.e. fellow candidate). Second party will take full responsibility to pay the third party before 8th of every month.
- F) The first party (AOMSI) will deposit the said amount directly to the bank account of the TWO Candidates sponsored by AOMSI.

First party

Second Party

Third party



**TRIPARTITE AGREEMENT BETWEEN THE ASSOCIATION OF ORAL AND
MAXILLOFACIAL SURGEONS OF INDIA (AOMSI), DIRECTOR OF THE
FELLOWSHIP PROGRAM AND THE FELLOW CANDIDATE.**

G) If the fellow candidate (i.e. third party) opts out of the program within one month of joining there will be no penalty but if he/she leaves after completion of one month, then he/she shall return the total grant amount already paid to second party.

H) In the unlikely event of a fellow candidate (third party) asked to discontinue on the Director's request after the completion of one month, the second party (Director) agrees that no other wait-listed candidate may be allotted for that centre for that year.

I) The fellow candidate (third party) agrees to follow the rules and regulations of the unit / institution / hospital, where he/she is pursuing the fellowship programme.

J) The fellow candidate (third party) shall respect the patient confidentiality and shall not use the patient's details and photographs pertaining to the unit / institution / hospital, during the tenure and even after completion of the fellowship programme. He/she shall agree not to use the data of the patients, in any mode viz: (scientific presentations, social forums, publications in social, electronic and print media) or for their personal use without permission from the director of the fellowship programme.

K) The fellowship candidate and the second party (i.e. Institution/Hospital) shall submit the report of successful completion of the fellowship program to AOMSI fellowship committee. The candidate will maintain the log book and attend the exit exam at the end of the training program, dates and examiners will be announced by the first party.

This agreement was entered with our free will and consent without anybody's intervention.

In witness whereof we set our hands on this -----day of-----20

Witness 1 :

Witness 2 :

First party

Second Party

Third party



Annexure II

Guidelines for sub-specialties



Fellowship in Maxillofacial Trauma

Goals

To establish a comprehensive training program for maxillofacial surgeons in the management of maxillofacial trauma.

Objectives

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of maxillofacial trauma which includes diagnosis of different hard and soft tissue injuries as a result of trauma based on history, clinical and radiological evaluations and complete knowledge of all aspects of the management of maxillofacial trauma patient including restoration of esthetics and function.

Skills & Attitudes: The trainee should, at the end of one year, be able to provide unified care in all aspects of maxillofacial trauma. The specific surgical skills required are

1. Initial Assessment and Intensive care of the trauma patient
2. Emergency airway management in the traumatized patients
3. Recognition and management of shock
4. Neurologic evaluation and management
5. Evaluation and management of injuries other than head and neck traumatic injuries along with other specialities
6. Advances in Maxillofacial trauma surgery
7. Early assessment and treatment planning of the maxillofacial trauma patient
8. Radiographic evaluation of facial injuries
9. Diagnosis and management of dentoalveolar injuries



10. Mandibular fractures and their management
11. Trauma to the temporomandibular regions and their management
12. Management of fractures of the zygomatic complex and arch.
13. Diagnosis and Treatment of Midface Fractures including naso-orbito-ethmoid fractures and orbital wall fractures
14. Diagnosis and management of pan-facial trauma patients
15. Ophthalmic Consequences of Maxillofacial Injuries
16. Evaluation and Management of Frontal Sinus Injuries
17. Nasal Fractures and their management
18. Management of Soft Tissue Injuries
19. Management of Human and Animal Bites
20. Diagnosis and Management of Traumatic Salivary Gland Injuries
21. Traumatic injuries of Trigeminal Nerve
22. Anaesthetic Considerations in the Acutely injured patient
23. Management of Maxillofacial Firearm Injuries
24. Management of Burns of the Head and Neck
25. Management of Facial Fractures in the Growing Patient
26. Oral and Maxillofacial Trauma in Geriatric Patient
27. Biomaterials for post-traumatic maxillofacial reconstruction
28. Reconstruction of avulsive defects of Maxillofacial Complex
29. Maxillofacial Prosthetics for the trauma Patient
30. Infection in Patients with Maxillofacial Trauma
31. Principles of fixation for maxillofacial trauma
32. Management of residual deformities

The trainee should develop a compassionate attitude towards dealing with both the patients as well as their relatives.



Communication abilities

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus)

Essential Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of maxillofacial trauma. Complete knowledge of all aspects in the management of different types of traumatic deformities including the concept of team management with interaction between associate specialties like anesthesia, general surgery, ENT, orthopedics, ophthalmology and neurosurgery.

Skills & Attitudes: The trainee should, at the end of year, be able to provide seamless care in all aspects of treatment of maxillofacial trauma. The specific surgical skills required are:

- Initial Assessment and Intensive care of the trauma patient
- Emergency airway management in the traumatized patients
- Recognition and management of shock
- Neurologic evaluation
- Early assessment and treatment planning of the maxillofacial trauma patient
- Radiographic evaluation of facial injuries
- Diagnosis and management of dentoalveolar injuries
- Mandibular fractures and their management
- Trauma to the temporomandibular regions and their management
- Management of fractures of the zygomatic complex and arch.
- Diagnosis and Treatment of Midface Fractures including naso-orbito-ethmoid fractures and orbital wall fractures
- Diagnosis and management of pan-facial trauma patients
- Ophthalmic Consequences of Maxillofacial Injuries
- Evaluation and Management of Frontal Sinus Injuries
- Nasal Fractures and their management
- Management of Soft Tissue Injuries
- Management of Human and Animal Bites



- Diagnosis and Management of Traumatic Salivary Gland Injuries
- Traumatic injuries of Trigeminal Nerve
- Management of Maxillofacial Firearm Injuries
- Management of Burns of the Head and Neck
- Management of Facial Fractures in the Growing Patient
- Managing Oral and Maxillofacial Trauma in Geriatric Patient
- Reconstruction of Avulsive defects of Maxillofacial Complex

Essential investigation and diagnostic procedures:

1. Clinical evaluation of traumatic injury by inspection and palpation.
2. Radiological evaluation by the use of routine radiographs including OPG, PNS views, PA views etc and also evaluation with the use of CT scans, MRI's, Ultrasonography etc.

Procedural and operative skills

Graded responsibility in care of patients and operative work (Structured training schedule): a structured programme will be followed to introduce the trainee to the evaluation and management of patients of maxillofacial trauma.

By the end of the trauma fellowship programme candidate should have successfully completed ATLS course.

The recognized trauma center must be performing not less than 250 surgical procedures in the area per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of 1 year should have carried out at least 75 cases under the supervision of a senior specialist on all aspects of maxillofacial trauma surgery.

+Key:

O – Washed up & observed

A – Assisted a more senior surgeon

PA – Performed procedure under the direct Supervision of a senior specialist.

PI – Performed independently.

Surgical procedures:

Procedures	Category	Number
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Mini (Champy's Principle)	Plating	PA	15
Trans buccal Plating		PA	5
Mid face osteosynthesis		PA	10
Zygoma elevation and fixation		PA	10
NasoOrbitoEthmoid plating		PA	5
Frontal fracture management		A	5
Tracheostomy		A	5
Residual deformity management		A	5
Management of continuity defects and Bone grafting		A	2
Circummandibular splinting		PA	5

The above suggested categories level of training and number are minimal requirements. The students / teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in Oral Maxillofacial Surgery in DCI approved program.
2. Passed FDSRCS from the Royal College of Surgeons of England, Glasgow or Edinburgh.
3. Passed FFDRCSI from the Royal College of Surgeons of Ireland.

Requirements for Accreditation of an Institution:

The department of Maxillofacial Surgery should have been in existence in the institution as an independent unit or as a part of the dental college. Should have performed at least **250** major maxillofacial surgical procedures related to maxillofacial trauma surgeries in the previous year. Should have facilities to train in ATLS.



The Staff:

The director of the program should be an actively practicing and dedicated maxillofacial surgeon

- Should have done at least 600 major surgical procedures related to maxillofacial trauma and training in ATLS.
- With a minimum of 10 years of post MDS experience who is attached to a 100 bedded multispecialty hospital with ICU or an exclusive 20 bedded maxillofacial surgery hospital with ICU.
- The hospital should have a round the clock Emergency unit

Teaching / Learning activities:

The training program must include the following didactic activities:

1. Lectures by faculty not only in maxillofacial surgery but also in related specialties like anesthesia, neurosurgery, orthopedics etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a PubMed indexed peer reviewed journal.

Grant: Rs.25000/- per month

Duration: 12 Months

Participation in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks
- c. **Clinico-pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary trauma team meeting a week to discuss management protocols for specific cases (core specialist required are maxillofacial surgeon, neurosurgeon, orthopaedics, general surgeons, ENT, anesthesia etc.
- e. **Community work:** camps/ field visits: It is important to improve awareness amongst the local population about the etiology, prevention and management of traumatic deformities. The trainee shall learn to organize camps in various districts surrounding the trauma center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: Ex: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.



Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (Oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Monitoring of teaching / learning activities

Methods:

1. Direct consultant to trainee interaction.
2. Maintenance of log book.
3. Formal quarterly review of performance.

Final Assessment to be submitted by the Director at the end of Programme to AOMSI.

Recommended books and journals:

1. Booth PW, Eppley BL, Schmelzeisen R Maxillofacial Trauma and Esthetic Facial Reconstruction 2nd Edition St. Louis Elsevier Saunders 2012.
2. Fonseca RJ, Barber HD, Powers M, Frost DE Oral and Maxillofacial Trauma 4th Edition St. Louis Elsevier Saunders 2012.
3. Rowe NL, Williams JL Maxillofacial Injuries 2nd edition Vol 1-2 The University of Michigan Churchill Livingstone 1994.
4. Killey HC, Seward GR, Harris M, McGowan DA Killey and Kay's Outline of Oral Surgery 2nd edition Part 1 and 2 The University of Michigan Wright 1987.
5. Andersson L, Kahnberg KE, Pogrel MA Oral and Maxillofacial Surgery 4th Edition Wiley – Blackwell August 2010.
6. Bagheri SC, Jo C Clinical Review of Oral and Maxillofacial Surgery 2nd Edition Elsevier Health Sciences December 2013.
7. Ellis E, Zide MF Surgical Approaches to Facial Skeleton 2nd Edition Lippincott Williams and Wilkins 2006.



AOMSI FELLOWSHIP

For A Better Tomorrow

Fellowship in Orthognathic Surgery

Duration

18 months.

Goals

To establish a comprehensive training program for maxillofacial surgeons in orthognathic surgery.

Objectives

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases requiring orthognathic surgery based on history, clinical and radiological evaluations and complete knowledge of all aspects of the diagnosis, treatment planning and management of patients requiring and undergoing orthognathic surgery to achieve desirable and planned esthetics and function.

Skills & Attitudes: The trainee should, at the end of training period, be able to diagnose, plan and manage cases requiring orthognathic surgery. The specific surgical skills required are:

1. Patient selection for Orthognathic Surgery
2. Diagnosis and Treatment Planning for Orthognathic Surgery
3. The Application of Video Imaging Technique to Orthognathic Surgery
4. Orthodontic Preparation for Orthognathic Surgery
5. Model Surgery
6. Wound Healing and Peri-operative Management
7. Maxillary and Midfacial Procedures
8. Mandibular Procedures
9. Combined Maxillary and Mandibular Surgery
10. Orthognathic Surgery before Completion of Growth
11. Maxillofacial Surgery for Treatment of Obstructive Sleep Apnoea
12. Rehabilitation after Orthognathic Surgery

The trainee should develop a compassionate attitude towards dealing with both the patients as well as their relatives.

Communication abilities

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus)



Essential Knowledge: The trainee should acquire detailed knowledge pertaining to the cases requiring orthognathic surgery. Complete knowledge of all aspects in the diagnosis, treatment planning and management of different types of maxillofacial structural and functional deformities requiring orthognathic surgery including the concept of team management with interaction between associate specialties like anesthesia, general surgery, orthodontics, orthopedics, ophthalmology, neurology etc.

Skills &Attitudes: The trainee should, at the end of one year, be able to diagnose, plan and manage cases requiring orthognathic surgery. The specific surgical skills required are:

- Patient selection for Orthognathic Surgery
- Diagnosis and Treatment Planning for Orthognathic Surgery
- The Application of Video Imaging Technique to Orthognathic Surgery
- Orthodontic Preparation for Orthognathic Surgery
- Model Surgery
- Revascularization and Healing of Orthognathic Surgical Procedures
- Preoperative, Intraoperative, and Postoperative Care
- Ambulatory Anesthesia for Orthognathic Surgery
- Surgically Assisted Maxillary Expansion
- LeFort I Osteotomy
- Anterior and Posterior Maxillary Segmental Osteotomies
- Maxillary Quadrangular LeFort I and Quadrangular LeFort II Osteotomy
- High Level Midface Osteotomy Surgery
- Bilateral Sagittal Split Osteotomy: Advancement and Setback
- Vertical Ramus Osteotomy and Inverted-L Osteotomy
- Anterior Mandibular Subapical Osteotomy
- Mandibular Body Osteotomy
- Total Mandibular Subapical Osteotomy
- Distraction Osteogenesis for Congenital Micrognathias
- Intraoral Distraction Osteogenesis
- General Procedures
- Combined Maxillary and Mandibular Surgery
- Rigid Internal Fixation in Orthognathic Surgery
- Functional Outcomes Following Orthognathic Surgery
 - Soft Tissue Changes Associated with Orthognathic Surgery
- Psychological Ramifications of Orthognathic Surgery
- Orthognathic Surgery Before Completion of Growth
- Maxillofacial Surgery for Treatment of Obstructive Sleep Apnoea
- Rehabilitation after Orthognathic Surgery

Essential investigation and Diagnostic procedures

1. Clinical evaluation by examination, inspection, palpation and models.
2. Radiological evaluation by the use of routine radiographs including OPG, PNS views, PA views etc and also evaluation with the use of Cephalograms and CT scans, MRI's, Ultrasonography etc.



Procedural and Operative Skills

Graded responsibility in care of patients and operative work (Structured training schedule): a structured program will be enforced to introduce the trainee to the evaluation and management of patients requiring orthognathic surgery.

The recognized center must be performing not less than 100 surgical procedures in the area per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of training period should have carried out/assisted at least 75 cases under the supervision of a senior specialist on all aspects of orthognathic surgery.

+Key:

O – Washed up & observed

A – Assisted a more senior surgeon

PA – Performed procedure under the direct Supervision of a senior specialist.

PI – Performed independently.

Surgical procedures:

Procedures	Category	Number
Genioplasty	PA + PI	7+3
Alloplastic augment	PA+PI	5+2
Lefort I	PA	10
BSSO	PA	10
VRO	PA	5
Segmental Osteotomy	A	5
Distraction Osteogenesis	A	10
Anterior Mandibular Subapical Osteotomy	A	5
Total Mandibular Subapical Osteotomy	A	3
Combined Maxillary and Mandibular Surgery	A	5



The above suggested categories level of training and number are minimal requirements. The students / teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in Oral Maxillofacial Surgery in DCI approved program.
2. Passed FDSRCS from the Royal College of Surgeons of England, Glasgow or Edinburgh.
3. Passed FFDRCSI from the Royal College of Surgeons of Ireland.

Requirements for Accreditation of an Institution:

The Department of Maxillofacial Surgery should have been in existence in the institution as an independent unit or as a part of the dental college and should have performed at least **100 orthognathic surgeries** in the previous year.

The Staff:

The director of the program should be an actively practicing and dedicated maxillofacial surgeon.

- **The unit should be headed by a person with a minimum of 10 years of post MDS experience who is attached to a 100 bedded multispecialty hospital with ICU or an exclusive 20 bedded maxillofacial surgery hospital with ICU.**
- **Should have done at least 250 major orthognathic surgical procedures.**

Teaching / Learning activities: The training program must include the following didactic activities:

1. Lectures by faculty not only in orthognathic surgery but also in related specialties like orthodontia, anesthesia, neurology, orthopedics etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a peer reviewed journal.

Grant: Rs.25000/- per month

Duration: 18 Months

Participation in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks
- c. **Clinico-pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary team meeting a week to discuss management protocols for specific cases (co re specialist required are maxillofacial surgeon, orthodontist, prosthodontist, pedodontist, plastic surgeons, general surgeons, anesthesiologist, etc.



- e. **Community work:** camps/ field visits: It is important to improve awareness amongst the local population about the etiology and management of maxillofacial structural and functional deformities. The trainee shall learn to organize camps in various districts surrounding a health care and trauma center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: Ex: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.

Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (Oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Monitoring of teaching / learning activities

Methods:

- 1. Direct consultant to trainee interaction.
- 2. Maintenance of log book.
- 3. Formal quarterly review of performance.
 - a) Frequency
 - b) Schedules or checklists, log books diary.

Final Assessment to be submitted by the Director at the end of Programme to AOMSI.

Recommended books and journals:

- 1. Fonseca RJ Oral and Maxillofacial Surgery: Orthognathic Surgery 2nd Edition Volume 2 The University Of Michigan Elsevier Health Sciences Saunders 2000.
- 2. Reyneke JP Essentials of Orthognathic Surgery 2nd Edition Quintessence Publishing Co, Inc. Carol Stream 2003.
- 3. Miloro M, Ghali GE, Larsen PE, Waite PD Peterson's Principles of Oral and Maxillofacial Surgery 2nd Edition Volume 2 B.C. Decker Inc. Hamilton 2004.
- 4. Posnik JC Principles and Practice of Orthognathic Surgery: Principles and Practice 1st Edition Volume 1-2 St. Louis Elsevier Inc. Saunders 2013.
- 5. Henderson D Color Atlas and Textbook of Orthognathic Surgery: The Surgery of Facial Skeleton Deformity 2nd Edition The University of Michigan Mosby Year Book Medical Publishers 1999.



6. Mani V Orthognathic Surgery: Esthetic Surgery of the Face 1st Edition Jaypee Brothers Medical Publishers 2014.
7. Mc Carthy JG, Li M, Coleman JJ, Sadove AM Aesthetic Surgery of Craniofacial Skeleton: An Atlas 1st Edition New York Springer –Verlag New York Inc. 2012.
8. Epker BN, Stella JP, Fish LC Dentofacial Deformities: Integrated Orthodontic and Surgical Correction 2nd Edition Volume 3 Mosby January 1998.



Proposal for AOMSI Fellowship Program in Oral & Maxillofacial Oncology and Reconstructive Surgery.

- Introduction
- The need for a separate training program in Oral & Maxillofacial Oncology and Reconstructive Surgery
 - Magnitude of Oral and Maxillofacial cancer in India
 - Shortcomings in Oral and Maxillofacial oncology services in India.
 - The need for sub-specialization in Oral & Maxillofacial surgery.
 - Training in other countries
 - What would a separate training program in Oral & Maxillofacial oncology accomplish?
- Candidacy: Who would be ideal candidates for the training program?
- Institutional Requirements
 - Faculty
 - Other Personnel
 - Infrastructure
- Selection Process
- Structure of the program
 - Practical training: Areas of special emphasis
 - Clinical Oral and Maxillofacial oncology
 - Reconstructive surgery
 - Training in ancillary specialties
 - Cancer prevention and community oncology
 - Research
 - Teaching and Seminars
 - Evaluation at the end of the training



Introduction:

This proposal for a new Fellowship program in Oral & Maxillofacial Oncology outlines the need, candidacy, institutional requirement, selection process and structure of the training program. The overall goal of the training program is to generate surgeons with a firm grounding in the biologic basis of current oncological practice, technical expertise in advanced Oral and Maxillofacial ablative and reconstructive surgery and training in translational research.

The Need For a Separate Training Program in Oral & Maxillofacial Oncology-

The Magnitude of Oral and Maxillofacial Oncological Problem in India

Head and neck cancer, which arises from the upper-aerodigestive tract mucosa and associated structures, is one of the major causes of death and disfigurement in the Indian subcontinent (Fig 1). While it account for about 3% of all tumors around the world, in India it represent over 30% of all tumors. Amongst these, oral cancer has the largest numbers. These tumors share similar risk factors, biologic behaviors and treatment responses. Although it is considered as a disease of elderly caused by smoking, alcohol abuse, pan and gutka chewing, recent analysis of national cancer registries revealed that the median age of the disease is decreasing and increasingly being seen in individuals with no apparent risk factors.

The management of Oral malignancy has now evolved from a single specialty approach to multidisciplinary team approach, which consists of OMFS oncosurgery (trained surgeon) head and neck surgical oncology, radiation oncology, medical oncology and rehabilitation services. Along with in depth knowledge in one own specialty, it is necessary to have a working knowledge of other services for effective participation in multidisciplinary tumor boards and treatment formulation. Application of that multidisciplinary approach not only has helped to improve the survival rate, albeit modest, certainly made an impact in improving quality of life of the patients through several organ and function preservation strategies. Development of that multidisciplinary teamwork culture is mandatory for personnel involved in the management of head and neck cancer.

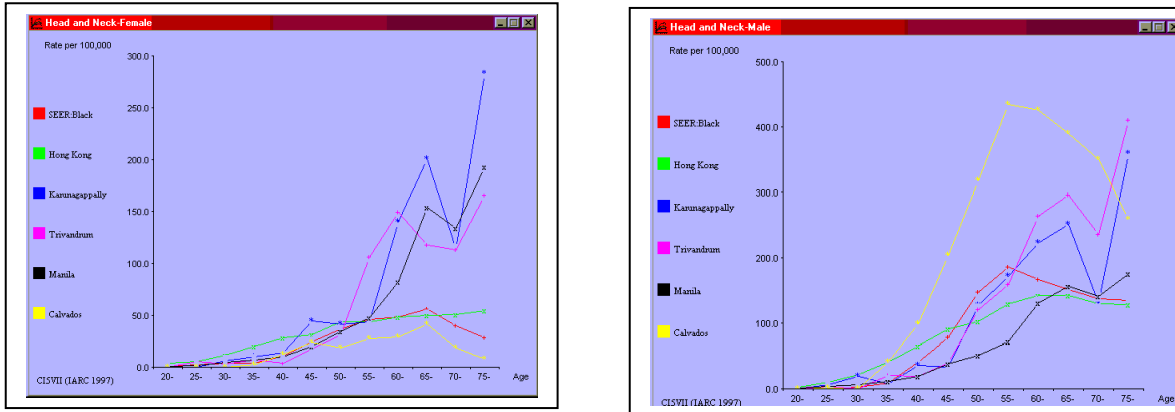


Figure 1

Shortcomings in OMFS oncology Surgical Services in India:

The various shortcomings in care for Oral cancer patients are summarized in the following table:

Requirements	Shortcomings	Reasons
Detection of oral cancer precancerous lesions	Less than 20% of head and neck cancers are detected at early stage (I and II).	Majority of oral and head and neck cancers are asymptomatic until late stage of disease. In addition, the lesions can mimic various benign inflammatory and infective conditions. Moreover, dental practitioners and ENT surgeons often miss the opportunity to detect asymptomatic lesions during routine clinical examinations.
Referral	Delayed and inappropriate referral	Limited knowledge of the nature of lesion often lead to inappropriate treatment and delay in diagnosis. With the lack of awareness of the head and neck oncology specialty, patients are often referred to general oncologists, surgeons or radiotherapists. This further delay initiation of treatment, and more often receives inappropriate treatment.



Treatment

Only a small proportion of referred patients receive the specialist seeing the treatment. The type of treatment often depends on the specialist seeing the treatment.



	comprehensive treatment	Few institutions are with good standards of care and such care is too expensive for most people.
Prevention	No organized health education and cancer prevention program	A significant number of Oral cancers are caused by tobacco and alcohol abuse and are largely preventable. However, because of the limited number of specialists with interest in oral oncology, there is a general lack of commitment in health education and initiation of head and neck cancer prevention measures.
HealthCare Planning	No national conscientious policy for the treatment and prevention of oral cancer	Through various cancer registries around the country, the exact prevalence of oral cancer is now available. However no national policy currently exists regarding treatment regimens for individual sub-sites and stage of disease.

There is an urgent need to increase the number and quality of trained personnel in oral & maxillofacial oncology & reconstructive surgery. Recognized training programs exclusively dedicated to oral maxillofacial oncology & reconstructive surgery are to be established in a few selected institutions with good standards. This will help create a group of well-trained professionals in the comprehensive management of oral cancer.

The need for sub-specialization in Oral & Maxillofacial oncology:

There are several reasons why Oral & Maxillofacial oncology cannot be practiced effectively if combined with general surgical oncology or as part of ENT or Maxillofacial surgery. The complexity of the anatomy, the unique biologic behavior and need for multidisciplinary treatment warrants the need for a surgeons with specialization. Unlike other parts of the body, in the oral cavity and PNS region, equal emphasis should be given in both ablative as well as reconstructive surgery. Often these cancers are deemed unresectable because of lack of expertise for reconstruction. Moreover, in most cancer centers around the world, this treatment is coordinated by oral oncosurgeons. Therefore a thorough understanding of all aspects of the management of oral cancer, in addition to both ablative and reconstructive surgery is essential to be an effective Oral & Maxillofacial surgeon. This can be achieved only through a dedicated training program in Oral & Maxillofacial oncology.



In India, there are a limited number of training programs available in surgical oncology, where the focus is on the treatment of cancer of the entire body, without any attempt for regional specialization. The other surgeons with focused interest in the head and neck region (ENT and Maxillofacial surgeons), often lack time to spend any significant time to train in head and neck oncology during their training period. It is therefore essential to have a training program with focus on Oral & Maxillofacial oncology. Considering the high incidence of oral cancer in India, there is an immediate need for a large number of dedicated and well-trained oral surgeons.

The specific roles of the Oral & Maxillofacial oncologist can be summarized as follows:

1. **Clinical Oncology:** This includes clinical evaluation, endoscopy, decision making regarding the appropriate choice and sequence of treatment regimen, counseling and, follow-up of patients after treatment.
2. **Ablative surgery:** The surgeons should have extensive experience in surgical management of all tumors in these sub-sites, including various organ preservation and conservative surgical procedures and anterior skull base surgeries.
3. **Reconstructive surgery:** Reconstruction of complex head and neck defects require extensive training and experience. This includes the use of local, pedicled and microvascular free tissue transfer.
4. **Oral Cancer Screening and Prevention:** In majority of cases, oral cancer is caused by the abuse of tobacco and alcohol which are largely preventable. In addition with the implementation of an effective cancer detection program, it is potentially possible to down-stage the tumors thereby improving the cure rate and reducing the morbidity associated with the treatment.

What would a separate training program in Oral & Maxillofacial oncology accomplish?

A dedicated Oral & Maxillofacial oncology training program is expected to produce well-trained oral & maxillofacial oncologists specialized in the region. They will coordinate the overall management of oral cancer, a major health problem in the Indian subcontinent. In addition to treatment of established patients they will help to initiate community oncology program, with the aim to lower the stage of disease upon diagnosis and initiation of cancer prevention measures. The research component of the course is expected to provide basis for investigative framework to start research projects pertaining to specific problems encountered in India. Overall, this training program is expected to improve the care of oral cancer in India.



Candidacy for the Oral and Maxillofacial Oncology and Reconstructive surgery

Minimum Qualifications:

1. MDS (Oral and Maxillofacial surgery).
2. MS (ENT)

Duration: 24 months.

Grant: Rs 25000 per month

Number of Candidates per year: One/100 new cases or Two/175 new cases

Institutional Requirements

In general, the institution should have a comprehensive cancer center with

1. Linear accelerators or proper MOUs with other institutes (should show 100 cases of radiation therapy proof with the tied up unit during inspection)
2. CT-planning
3. Medical oncology services
4. Tumor registry
5. Pain and palliation service
6. Facilities for rehabilitation.

The oral cancer service should handle no less than 100 new patients every year. The surgical service should undertake full spectrum of ablative surgery including that of anterior skull base and reconstructive surgery including microvascular free tissue transfer, (minimum of 30 per year) and distractions in case of benign tumours, rehabilitation including obturators, guiding flanges.

Faculty:

General Requirements

Course Director

A minimum of 13 years of experience in OMFS postgraduate teaching with relevant contribution (2 Publications in Indexed Journal, Course coordinators in International Conferences, Invited speakers in International conferences) to the speciality. Also proof of minimum 250 cases operated in the previous years.

Or

Prof in OMFS with Fellowship (minimum of 2 years) in OMF Oncology or Head and Neck Oncology from a recognized university in India or abroad with relevant contributions (2 Publications in Indexed Journal, Course coordinators in



International Conferences, Invited speakers in International conferences) to the speciality.

Faculties:

1. MDS – Oral and Maxillofacial surgery – 2 nos.

Part Time(Desirable)

2. MDS – Oral Medicine and Radiology – 1nos.
3. MDS – Oral Pathologist – 1nos.
4. MDS – Prosthodontist – 1 no.
5. MD – General Pathologist – 1nos.
6. MS – General Surgeon -1 no.
7. MS/DNB – ENT – 1 no.
8. Mch/DNB – Plastic surgeon – 1no.
9. Mch/DNB – Neurosurgeon – 1 no.
10. MD;DM – Medical Oncology – 1 no.
11. MD – Radiation Oncology – 1no.
12. Pain and palliative Specialist – 1no.
13. MD/DMRD - Radiodiagnosis – 1.
14. Anesthesiologist – 3 nos.
15. BDS – General Dentist – 1no.

Supportive Staffs:

1. Speech and swallowing therapist – 1
 2. Medical social worker(MSW) – 1
- All the associated staff proof to be submitted during inspection.

Infrastructure

Out patient clinic:

The out patient clinic should have the following facilities-

1. Flexible/Rigid laryngoscope with image capture facility
2. Facilities for Fine Needle Aspiration Cytology
3. Speech and swallowing therapy
4. The clinic should be designed for both new and follow up patients. In addition it is desirable to have a combined clinic for the following faculty members.



Multidisciplinary tumor board:

Multidisciplinary tumor board room should contain a minimum of 25 seating capacity with audio visual facilities and an attached library. The Library should contain textbooks on following subjects - Anatomy, Physiology, Biochemistry, Pathology, Oral pathology, Microbiology, pharmacology, Gen. Surgery, Gen. Medicine, Oral and Maxillofacial surgery, Medical Oncology, Radiation Oncology, Surgical Oncology, Head and Neck Oncology, Oral surgical Oncology, Cancer biology, Pain and Palliative medicine etc books.

A multidisciplinary tumor board with participation of Oral and Maxillofacial Oncologist, reconstructive/plastic surgeon, (General pathologist, Oral Pathologist, Prosthodontist, General Surgeon, ENT surgeon, Neurosurgeon, Medical Oncologist, Radiation Oncologist, Pain and palliative therapist, and Radiologist are desirable for effective management of head and neck cancer patients. The fellow trainee should present all new cases in this tumor board and derive at a comprehensive treatment plan after discussing with all the board members.

Operating Room

1. Major Operating Room – 2

General surgical equipments

- a. Surgical Microscope – 1
- b. Surgical Laser - 1
- c. Fibro Optic Intubation set – 1 adult, 1 paediatric.
- d. Surgical saw – 1 set.
- e. Drill and bone plating system – 2 sets
- f. Pathology service with frozen section
- g. Tracheostomy set – 2 sets
- h. Skin graft set – 1
- defibrillator – 1 no.

2. Minor Operating Room – 1

a. General surgical equipments

- a. Tracheostomy set – 1 no.**
- b. Defibrillator – 1 no.**



Inpatient Services:

1. ICU – 5 Beds and 3 Ventilators(2 adult vent. and 1 paediatric vent.)
2. Males – 10 Beds/fellow or 15Beds/2 fellows
3. Females – 10beds/fellow or 15Beds/2 fellows
4. Paediatric – 2beds
5. Pain and Palliative – 2beds.
6. general ward should also have one tracheostomy set, and one defibrillator

Selection Process:

The candidates for the fellowship programme can be selected by the centres on their own/AOMSI IBOMS by the method of transparency.

Proposed Structure of the Training Program:

- Practical training: Areas of special emphasis
 - Clinical oral oncology
 - Reconstructive surgery
 - Training in ancillary specialties
 - Cancer prevention and community oncology
- Teaching and Seminars
- Exchange program with other Institutions
- Evaluation at the end of the training



Practical Training:

Clinical Oral Oncology:

Out patient evaluation in the Oral oncology clinic:

Fellows should evaluate and plan the care and follow-up of patients referred to the clinic for outpatient evaluation. The outpatient evaluation should serve the important purpose of acquisition of clinical skills under the guidance of faculty.

Multidisciplinary Tumor Board

The fellow should present the patients at the multidisciplinary tumor board and should develop a treatment plans in consultation with other faculty members.

In patient care:

The fellow should provide care of patients admitted in the wards under the supervision of the faculty. This should also include care of convalescing postoperative patients. The faculty should provide formal teaching and supervision of patient care.

Intensive Care:

The fellow should be directly responsible for the management of all ICU patients. This requires thorough familiarization with principles of critical care monitoring, management and invasive procedures. Care of ventilated patients should be provided in concert with the anesthesiologist on call. The faculty and the anesthesiologist should provide direct supervision and teaching during daily rounds.



Didactic Teaching and Seminars:

A comprehensive teaching program syllabus should be in place prior to the initiation of the fellowship program in Oral & Maxillofacial oncology. A proposed syllabus and weekly work schedule are attached as appendix. The *core curriculum* should cover all basic and applied areas of the sub specialty. The teaching could be in the form of didactic lectures, seminars and discussions. Regular *journal clubs* should be incorporated into the teaching program once a week, in order to keep abreast with developments in the field. *Seminars* on important basic and applied topics will need to be presented by the fellow every fortnight. The fellow should also present weekly *pre-operative conferences* where the clinical, imaging and pathology data of all prospective surgical patients are discussed. In addition the fellow should present the clinical intraoperative findings at the *clinico-pathology conference*. The fellow should attend at least one head and neck oncology/ oncology *national conference* every year. The fellow should be encouraged to present his/her research data at these meetings.

Rotation among institutions:

The trainees should be encouraged to spend time at other institutions with oral surgical oncology training program to enable maximal benefit from the strengths of each program. In particular, rotation to centers of excellence in microvascular surgery should be encouraged. Specific details will need to be worked out after the individual programs are in place.



Evaluation at the end of the training:

There should be an examination at the end of training period. The evaluation process should be comprehensive and should test theoretical knowledge as well as the practical skills required to practise oral and maxillofacial surgical oncology. The candidates should maintain a logbook of all surgical procedures performed during training.

PROPOSED CORE CURRICULUM

OBJECTIVES: The objective of the training program in Oral and Maxillofacial Oncology is to provide a comprehensive training in management of all facets of cancer including ablative and reconstructive surgery, fundamentals of radiation oncology and medical oncology, cancer biology and research methods. This is accomplished by providing outstanding clinical training (including both decision-making and technical expertise), encouraging teaching, and developing a scientific and investigative framework for research. The emphasis will be on providing state-of-the-art multidisciplinary care for patients with head and neck cancer and to provide a rigorous academic experience. At the end of the training period the candidates are expected to have an in-depth knowledge, skills and attitude to take up academic career in Oral and Maxillofacial oncology and leadership positions in the field. The duration of the training period will be for 24 months.

SUMMARY:

The core curriculum includes basic tumor biology, pathology, anatomy, molecular biology and genetics, clinical research methods, radiation oncology, medical oncology and different aspects of Oral and Maxillofacial oncology.

To attend weekly interdisciplinary Tumor Board

Elective rotations (one month) in radiation oncology, medical oncology, pathology, ENT, neurosurgery, speech and swallowing therapy, pain and palliation and prosthetics.



DETAILED SYLLABUS

The training will have three parts extending over a period of 24months.

Part I: Lectures on basic sciences.

Molecular cell biology of cancer – the cell cycle regulations, oncogenes,chromosomal abnormalities-

1. Genetics
2. Epidemiology of cancer
3. Mechanism of Carcinogenesis
4. Biologic therapy
5. Gene-therapy
6. Principles of radiation therapy.
7. Principles of chemotherapy.
8. Clinical Research Methods
9. Head and neck radiology
10. Applied head and neck anatomy
11. Developing hypothesis and planning research project
12. Designing a clinical research project
13. Data collection and monitoring
14. Biostatistics primer
15. Ethics in biomedical research
16. Securing research grants

Part II: Didactic course in Oral and Maxillofacial oncology

1. Lip and oral cavity
2. Oral mucosa in health and disease
3. Benign cysts and tumors of the jaw
4. Management of Mandible
5. Oropharynx
6. Paranasal sinus
7. Parapharyngeal space
8. Salivary gland
9. Anterior skullbase
10. Management of Neck



Part III: Didactic and laboratory course in reconstructive surgery

1. Basic plastic surgery principles
2. Reconstruction of soft tissue defects of face
3. Nose reconstruction
4. Lips reconstruction
5. Oral cavity reconstruction
6. Mandible reconstruction
7. Skull base reconstruction
8. Prosthetic rehabilitation

Part IV: Didactic and clinical training in pain and palliation

1. Management of cancer pain
2. Specialized care of the terminally ill.
3. Nutritional support.

Part V: Rehabilitation

1. Speech and swallowing therapy
2. Maxillofacial prosthetics

Part III: Clinical work including surgery, daily patient management, management of patients on radiotherapy and chemotherapy and palliative care for advanced head and neck malignancy patients.

1. Once a month inter disciplinary seminar
2. Fortnightly journal club presentation.
3. Tumor board meetings once a week.
4. Attendance to at least one oncology conference every year.
5. Maintenance of a log book reflecting cases worked up, planned, assisted, performed, with details of adjunctive therapy (chemotherapy, RT and palliative care).

MODEL WEEKLY TRAINING SCHEDULE

MONDAY		TUESDAY			WEDNESDAY		THURSDAY			FRIDAY		SATURDAY
CLINICS	THEATRE	CLINICS	THEATRE	DIDACTIC	CLINICS	THEATRE	CLINICS	THEATRE	DIDACTICS	CLINCS	THEATRE	DIDACTIC
				JOURNAL CLUB	MULTI DISC.				CLINICO-PATH			CORE CURRICULUM



Surgery – OMFO: Head and Neck oncology; Ablations/PRS: Plastic and Reconstructive Surgery/CRF: Craniofacial Surgery

Multi Disc. Tumor Board followed by Multi Disciplinary Clinic with head and neck surgeon, radiotherapy, medical oncology and rehabilitation

Clinico Path. Joint meeting with pathologists and surgical team

OUTLINE OF THE TRAINING PROGRAM:

6 months	1 month each Department	3 months	1 – 3 months	9 months	
Oral and Maxillofacial Oncology /Microvascular surgery and skull base surgery	Rotation in Neurosurgery Radiation oncology/ Medical Oncology	Oral and Maxillofacial Oncology /Microvascular surgery and skull base surgery	Postings in other institutions.	Microvascular surgery and skull base surgery	

Recommended Journals:

1. Journal of Oral oncology.
2. Otolaryngol Head and neck surgery.
3. New England journal of medicine.
4. Journal Of Clinical Oncology.
5. Journal of Head and Neck Oncology.
6. Radiation Oncology.
7. International journal of Oral and Maxillofacial surgery
8. International j Radiation Oncol Biol and physics.
9. Lancet.
10. American J Otolaryngology.



Practical Examination:

Will comprise of Case Presentations and Viva Voce

	Duration in	Distribution	Total number of Marks
Case Presentation	3	1 Long Case 2 Short Cases	100
Viva Voce	1	-----	50
Log Book Assessment		-----	50

Examiners:

Two Examiners: One Internal and Two Externals

Examination results:

- ‖ The fellow has to satisfy the examiners and score at least fifty percent of the marks in the theory and practical individually.
- ‖ The fellow who shows exceptional merit will be awarded distinction. (More than 75% marks)

References

Head and Neck Surgery and Oncology, Third Edition by Jatin P. Shah

Head and Neck Cancer: A Multidisciplinary Approach by Louis B. Harrison

Cancer of the Head and Neck by Jatin P. Shah

Head and Neck Cancer: Multimodality Management by Jacques Bernier

Radiotherapy for Head and Neck Cancers: Indications and Techniques by K. Kian Ang and Adam Garden

Head and Neck Cancer Imaging (Medical Radiology / Diagnostic Imaging) by Robert Hermans and Albert L. Baert



Radiotherapy for Head and Neck Cancers: Indications and Techniques by K. Kian Ang and Adam S. Garden

Cancer of the Head and Neck
by Eugene N. Myers and James Y. Suen

Rehabilitation of the Head and Neck Cancer Patient: Psychosocial Aspects
by Andrew Blitzer

[Grabb and Smith's Plastic Surgery \(GRABB'S PLASTIC SURGERY\)](#) by Charles H. Thorne, Scott P. Bartlett, Robert W. Beasley and Sherrell J. Aston

Proposed Names of Inspectors for Fellowship Program in Oral & Maxillofacial Oncology & Reconstructive Surgery

DR. PAUL SEBASTIAN
REGIONAL CANCER CENTER
THIRUVANANTHAPURAM

DR SUBRAMANIYA IYER
HOD DEPARTMENT OF PLASTIC SURGERY
AMIRTA INSTITUTE OF MEDICAL SCIENCES KOCHI KERALA

DR MONI ABRAHAM KURIAKOSE
HEAD OF SURGICAL ONCOLOGY
CHIEF HEAD AND NECK SURGERY
MUZUMDAR SHAW CANCER
CENTER BANGALORE

DR GEORGE
PAUL DIRECTOR
SHARON CANCER CENTER FAIR
LANDS SALEM

DR ASHOK SHENOY
KIDWAI INSTITUTE OF
ONCOLOGY BANGALORE

DR SABITHA
HEAD OF ORAL ONCOLOGY KIDWAI INSTITUTE OF ONCOLOGY
BANGALORE



DR SHILPA CHATNI
CANCER CENTER
NAVANAGAR HUBLI

DR ARUN P
TATA MEMORIAL CENTER
KOLKATTA

DR ARAVIND KRISHNAMOORTHY
CANCER INSTITUTE (WAI)ADYAR
CHENNAI

DR AZEEM MOIDEEN CHIEF
OF HEAD AND NECK
KOLAR INSTITUTE OF MEDICAL SCIENCES
KOLAR

DR ANIL D CRUZ
TATA MEMORIAL HOSPITAL
MUMBAI

DR.VIJAY DESHMUK
DR.BORLE DR.SANJIV
NAIROO



Fellowship in cleft lip & Palate surgery

Goals:

To establish a comprehensive training program for maxillofacial surgeons in the management of Cleft Lip & Plate care.

Objectives:

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip & Palate, Privariate Measure if any, diagnosis and appropriate investigation to support the diagnoses at different stages in the development and growth of the diagnoses at different stages in the development and growth of the child with Cleft Lip & Palate anomaly or other developmental craniofacial deformity. Complete knowledge of all aspects of the management of this complex deformity including the concept of team management with interaction between other associated specialties like orthodontics, Pediatric dentistry, Speech therapy, ENT, etc.

Skills & Attitudes: The trainee should, at the end of one year, be able to provide seamless care in all aspects of Cleft Lip & Palate surgery from birth till adulthood. The specific surgical skills required are

1. Primary cleft Lip repair.
 2. Primary cleft palate repair.
 3. Secondary alveolar bone grafting.
 4. Pharyngoplasty.
 5. Secondary Lip repair.
 6. Secondary palate repair.
 7. Orthognatic surgery including Le Fort I osteotomy and any other skeletal surgery as may be required.
 8. Distraction osteogenesis.
 9. Rhinoplasty.
 10. Flexible fiberoptic nasobronchoscopy to evalua velopharyngeal function
 11. Other surgical skills required in the Management of more extensive facial deformaities.
- The trainee should develop a compassionate attitude towards dealing with both the cleft children and the parents and relatives.



Communication abilities:

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus):

Essential knowledge: The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip & palate anomaly or other developmental craniofacial deformity.

Complete knowledge of all aspects of the management of this complex deformity including the concept of team management with interaction between associate specialties like orthodontics, pediatric dentistry, speech therapy, ENT, etc.

Skills & Attitudes: The trainee should, at the end of year, be able to provide seamless care in all aspects of Cleft Lip & palate surgery from birth till adulthood. The specific surgical skills required are:

1. Primary cleft lip repair.
2. Primary cleft lip repair.
3. Secondary alveolar bone grafting.
4. Pharyngoplasty.
5. Secondary lip repair.
6. Secondary palate lip repair.
7. Orthognathic surgery including Le Fort I osteotomy, mandibular osteotomy and any other skeletal surgery may be required.
8. Distraction osteogenesis.
9. Rhinoplasty.
10. Other surgical skills required in the management of more extensive facial deformities.

Essential investigation and diagnostic procedures:

1. Flexible fiberoptic nasendoscopy to evaluate velo-pharyngeal function.
2. Evaluation of CT scan angiogram, MRI etc, as required.



Procedural and operative skills

Graded responsibility in care of patients and operative work (structured training schedule): a structured program will be enforced to introduce the trainee to the evaluation and management of cleft lip & palate deformities.

The recognized cleft center must be performing not less than 200 surgical procedures in the area of cleft lip & palate surgicals procedures in the area of cleft & palate surgeries per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of 1 year should have carried out at least 50 cases under the supervision of a senior specialist on all aspects of cleft surgery.

+key: o—washed up & observed

A—Assisted a more senior surgeon

PA—Performed procedure under the direct supervision of a senior specialist. P1—performed independently.

Surgical procedures:

Procedures	category	Number
Unilateral cleft lip	PA	15
Bilateral cleft lip	PA	5
Cleft palate	PA	15
Secondary Alveolar Bone grafting	PA	10
Cleft osteotomies	PA	5
Pharynoplasties	A	5
Secondary lip repair	A	5
Secondary palaterepair	A	5
Distraction Osteogness	A	3
Cleft rhinoplasty	A	5
Fiberoptic nasendoscopy	PA	5



The above suggested categories level of training and number are minimum requirements. The students/Teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in oral Maxillofacial Surgery in DCI approved program.
2. DNB in Maxillofacial surgery recognized by the DCI.
3. Passed FDSRCS from the Royal College OF Surgeons of England, Glasgow or Edinburgh.
4. Passed FFDRCSI from the Royal College of surgeons of Ireland.

Duration: 12 months

Requirements For accreditation of an institution:

The department of Maxillofacial Surgery should have been in existence in the institutions as an independent unit or as a part of the dental college. Should have performed at least 200 major maxillofacial surgical procedures related to cleft lip & palate surgeries in the previous year.

The staff:

The director of the program should be an actively practicing and dedicated maxillofacial surgeon

- Should have done at least 500 major surgical procedures related to cleft lip & palate surgery
- Should have post-graduate degree in maxillofacial surgeon with at least 8 years of continuous
- Should be a post graduate teacher for an MDS program in Oral & maxillofacial surgery.

Should have taken part and presented papers in National and International Maxillofacial & cleft surgery conferences



Teaching / Learning activities: The training program must include the following didactic activities:

1. Lectures by faculty not only in maxillofacial surgery but also in related specialities like orthodontics, speech therapy, ENT, etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a peer reviewed journal.

Grant: Rs.25000/- per month

Duration: 12 Months

in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks.
- c. **Clinico pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary cleft team meeting a week to discuss management protocols for specific cases (core specialist required are maxillofacial surgeon, orthodontist, plastic surgeons and speech therapists. Other specialist who form second tier are pedodontist, ENT, dentist, Social worker, psychologist, pediatrician, etc.
- e. **Community work-camps /field visits:** It is important to improve awareness amongst the local population about the etiology, prevention and management of cleft deformities. The trainee shall learn to organize camps in various districts surrounding the cleft center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: EX: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.

Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.



Monitoring teaching/learning activities

- a) Methods
 1. Direct consultant to trainee interaction.
 2. Maintenance of log book.
 3. Formal quarterly review of performance.
- b) Frequency c) schedules of checklist, log book dairy.

University Examination

There shall be one therapy paper of three hours duration carrying 100 marks. Clinical examination would also be for 100 marks and viva voce would be for 50 marks/. A candidate has to score a minimum of 50% for passing the examination.

Scheme of examination:

- a) Written: One clinical paper covering cleft lip & palate management.
- b) Clinical examination: 2 case presentations with discussion on diagnoses, treatment plan and management.
- c) Viva-voce- 1 viva of 1 hour duration can be held to complement the written and clinical examination.

Examiners: - 3- one internal

Two external appointed by AOMSI fellowship committee.

Recommended books and journals:

1. Multidisciplinary management of cleft lip and plate by bardach and Morris.
2. Atlas of cleft and craniofacial surgery by salyer and bradach.
3. Plastic surgery by McCarthy.
4. Cleft lip & palate by Berkowitz
5. Cleft palate & craniofacial Journal.
6. Plastic reconstructive surgery journal.
7. Journal of craniomaxillofacial surgery.



Annexure III

Guidelines for Centres



For A Better Tomorrow

Fellowship in Maxillofacial Trauma

Goals

To establish a comprehensive training program for maxillofacial surgeons in the management of maxillofacial trauma.

Objectives

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of maxillofacial trauma which includes diagnosis of different hard and soft tissue injuries as a result of trauma based on history, clinical and radiological evaluations and complete knowledge of all aspects of the management of maxillofacial trauma patient including restoration of esthetics and function.

Skills & Attitudes: The trainee should, at the end of one year, be able to provide unified care in all aspects of maxillofacial trauma. The specific surgical skills required are

1. Initial Assessment and Intensive care of the trauma patient
2. Emergency airway management in the traumatized patients
3. Recognition and management of shock
4. Neurologic evaluation and management
5. Evaluation and management of injuries other than head and neck traumatic injuries along with other specialities
6. Advances in Maxillofacial trauma surgery
7. Early assessment and treatment planning of the maxillofacial trauma patient
8. Radiographic evaluation of facial injuries
9. Diagnosis and management of dentoalveolar injuries
10. Mandibular fractures and their management
11. Trauma to the temporomandibular regions and their management

12. Management of fractures of the zygomatic complex and arch.
13. Diagnosis and Treatment of Midface Fractures including naso-orbito-ethmoid fractures and orbital wall fractures
14. Diagnosis and management of pan-facial trauma patients
15. Ophthalmic Consequences of Maxillofacial Injuries
16. Evaluation and Management of Frontal Sinus Injuries
17. Nasal Fractures and their management
18. Management of Soft Tissue Injuries
19. Management of Human and Animal Bites
20. Diagnosis and Management of Traumatic Salivary Gland Injuries
21. Traumatic injuries of Trigeminal Nerve
22. Anaesthetic Considerations in the Acutely injured patient
23. Management of Maxillofacial Firearm Injuries
24. Management of Burns of the Head and Neck
25. Management of Facial Fractures in the Growing Patient
26. Oral and Maxillofacial Trauma in Geriatric Patient
27. Biomaterials for post-traumatic maxillofacial reconstruction
28. Reconstruction of avulsive defects of Maxillofacial Complex
29. Maxillofacial Prosthetics for the trauma Patient
30. Infection in Patients with Maxillofacial Trauma
31. Principles of fixation for maxillofacial trauma
32. Management of residual deformities

The trainee should develop a compassionate attitude towards dealing with both the patients as well as their relatives.

Communication abilities

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus)

Essential Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of maxillofacial trauma. Complete knowledge of all aspects in the management of different types of traumatic deformities including the concept of team management with interaction between associate specialties like anesthesia, general surgery, ENT, orthopedics, ophthalmology and neurosurgery.

Skills & Attitudes: The trainee should, at the end of year, be able to provide seamless care in all aspects of treatment of maxillofacial trauma. The specific surgical skills required are:

- Initial Assessment and Intensive care of the trauma patient
- Emergency airway management in the traumatized patients
- Recognition and management of shock
- Neurologic evaluation
- Early assessment and treatment planning of the maxillofacial trauma patient
- Radiographic evaluation of facial injuries
- Diagnosis and management of dentoalveolar injuries
- Mandibular fractures and their management
- Trauma to the temporomandibular regions and their management
- Management of fractures of the zygomatic complex and arch.
- Diagnosis and Treatment of Midface Fractures including naso-orbito-ethmoid fractures and orbital wall fractures
- Diagnosis and management of pan-facial trauma patients
- Ophthalmic Consequences of Maxillofacial Injuries
- Evaluation and Management of Frontal Sinus Injuries
- Nasal Fractures and their management
- Management of Soft Tissue Injuries
- Management of Human and Animal Bites
- Diagnosis and Management of Traumatic Salivary Gland Injuries
- Traumatic injuries of Trigeminal Nerve
- Management of Maxillofacial Firearm Injuries
- Management of Burns of the Head and Neck
- Management of Facial Fractures in the Growing Patient
- Managing Oral and Maxillofacial Trauma in Geriatric Patient
- Reconstruction of Avulsive defects of Maxillofacial Complex

Essential investigation and diagnostic procedures:

1. Clinical evaluation of traumatic injury by inspection and palpation.
2. Radiological evaluation by the use of routine radiographs including OPG, PNS views, PA views etc and also evaluation with the use of CT scans, MRI's, Ultrasonography etc.

Procedural and operative skills

Graded responsibility in care of patients and operative work (Structured training schedule): a structured programme will be followed to introduce the trainee to the evaluation and management of patients of maxillofacial trauma.

By the end of the trauma fellowship programme candidate should have successfully completed ATLS course.

The recognized trauma center must be performing not less than 250 surgical procedures in the area per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of 1 year should have carried out at least 75 cases under the supervision of a senior specialist on all aspects of maxillofacial trauma surgery.

+Key:

O – Washed up & observed

A – Assisted a more senior surgeon

PA – Performed procedure under the direct Supervision of a senior specialist.

PI – Performed independently.

Surgical procedures:

Procedures	Category	Number
Mini Plating (Champy's Principle)	PA	15
Trans buccal Plating	PA	5
Mid face osteosynthesis	PA	10
Zygoma elevation and fixation	PA	10
NasoOrbitoEthmoid plating	PA	5
Frontal fracture management	A	5

Tracheostomy	A	5
Residual deformity management	A	5
Management of continuity defects and Bone grafting	A	2
Circummandibular splinting	PA	5

The above suggested categories level of training and number are minimal requirements. The students / teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in Oral Maxillofacial Surgery in DCI approved program.
2. Passed FDSRCS from the Royal College of Surgeons of England, Glasgow or Edinburgh.
3. Passed FFDRCSI from the Royal College of Surgeons of Ireland.

Requirements for Accreditation of an Institution:

The department of Maxillofacial Surgery should have been in existence in the institution as an independent unit or as a part of the dental college. Should have performed at least **250** major maxillofacial surgical procedures related to maxillofacial trauma surgeries in the previous year. Should have facilities to train in ATLS.

The Staff:

- The director of the program should be an actively practicing and dedicated maxillofacial surgeon
- Should have done at least 600 major surgical procedures related to maxillofacial trauma and training in ATLS.
 - With a minimum of 10 years of post MDS experience who is attached to a 100 bedded multispecialty hospital with ICU or an exclusive 20 bedded maxillofacial surgery hospital with ICU.
 - The hospital should have a round the clock Emergency unit

Teaching / Learning activities:

The training program must include the following didactic activities:

1. Lectures by faculty not only in maxillofacial surgery but also in related specialties like anesthesia, neurosurgery, orthopedics etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a PubMed indexed peer reviewed journal.

Participation in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks
- c. **Clinico-pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary trauma team meeting a week to discuss management protocols for specific cases (core specialist required are maxillofacial surgeon, neurosurgeon, orthopaedics, general surgeons, ENT, anesthesia etc.
- e. **Community work:** camps/ field visits: It is important to improve awareness amongst the local population about the etiology, prevention and management of traumatic deformities. The trainee shall learn to organize camps in various districts surrounding the trauma center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: Ex: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.

Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (Oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Monitoring of teaching / learning activities

Methods:

1. Direct consultant to trainee interaction.
2. Maintenance of log book.
3. Formal quarterly review of performance.

Final Assessment to be submitted by the Director at the end of Programme to AOMSI.

Recommended books and journals:

1. Booth PW, Eppley BL, Schmelzeisen R Maxillofacial Trauma and Esthetic Facial Reconstruction 2nd Edition St. Louis Elsevier Saunders 2012.
2. Fonseca RJ, Barber HD, Powers M, Frost DE Oral and Maxillofacial Trauma 4th Edition St. Louis Elsevier Saunders 2012.
3. Rowe NL, Williams JL Maxillofacial Injuries 2nd edition Vol 1-2 The University of Michigan Churchill Livingstone 1994.
4. Killey HC, Seward GR, Harris M, McGowan DA Killey and Kay's Outline of Oral Surgery 2nd edition Part I and 2 The University of Michigan Wright 1987.
5. Andersson L, Kahnberg KE, Pogrel MA Oral and Maxillofacial Surgery 4th Edition Wiley – Blackwell August 2010.
6. Bagheri SC, Jo C Clinical Review of Oral and Maxillofacial Surgery 2nd Edition Elsevier Health Sciences December 2013.
7. Ellis E, Zide MF Surgical Approaches to Facial Skeleton 2nd Edition Lippincott Williams and Wilkins 2006.



For A Better Tomorrow

Fellowship in Orthognathic Surgery

Duration

18 months.

Goals

To establish a comprehensive training program for maxillofacial surgeons in orthognathic surgery.

Objectives

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases requiring orthognathic surgery based on history, clinical and radiological evaluations and complete knowledge of all aspects of the diagnosis, treatment planning and management of patients requiring and undergoing orthognathic surgery to achieve desirable and planned esthetics and function.

Skills &Attitudes: The trainee should, at the end of training period, be able to diagnose, plan and manage cases requiring orthognathic surgery. The specific surgical skills required are:

- 1.Patient selection for Orthognathic Surgery
- 2.Diagnosis and Treatment Planning for Orthognathic Surgery
- 3.The Application of Video Imaging Technique to Orthognathic Surgery
- 4.Orthodontic Preparation for Orthognathic Surgery
- 5.Model Surgery
- 6.Wound Healing and Peri-operative Management
- 7.Maxillary and Midfacial Procedures
- 8.Mandibular Procedures
- 9.Combined Maxillary and Mandibular Surgery
- 10.Orthognathic Surgery before Completion of Growth
- 11.Maxillofacial Surgery for Treatment of Obstructive Sleep Apnoea
- 12.Rehabilitation after Orthognathic Surgery

The trainee should develop a compassionate attitude towards dealing with both the patients as well as their relatives.

Communication abilities

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus)

Essential Knowledge: The trainee should acquire detailed knowledge pertaining to the cases requiring orthognathic surgery. Complete knowledge of all aspects in the diagnosis, treatment planning and management of different types of maxillofacial structural and functional deformities requiring orthognathic surgery including the

concept of team management with interaction between associate specialties like anesthesia, general surgery, orthodontics, orthopedics, ophthalmology, neurology etc.

Skills & Attitudes: The trainee should, at the end of one year, be able to diagnose, plan and manage cases requiring orthognathic surgery. The specific surgical skills required are:

- Patient selection for Orthognathic Surgery
- Diagnosis and Treatment Planning for Orthognathic Surgery
- The Application of Video Imaging Technique to Orthognathic Surgery
- Orthodontic Preparation for Orthognathic Surgery
- Model Surgery
- Revascularization and Healing of Orthognathic Surgical Procedures
- Preoperative, Intraoperative, and Postoperative Care
- Ambulatory Anesthesia for Orthognathic Surgery
- Surgically Assisted Maxillary Expansion
- LeFort I Osteotomy
- Anterior and Posterior Maxillary Segmental Osteotomies
- Maxillary Quadrangular LeFort I and Quadrangular LeFort II Osteotomy
- High Level Midface Osteotomy Surgery
- Bilateral Sagittal Split Osteotomy: Advancement and Setback
- Vertical Ramus Osteotomy and Inverted-L Osteotomy
- Anterior Mandibular Subapical Osteotomy
- Mandibular Body Osteotomy
- Total Mandibular Subapical Osteotomy
- Distraction Osteogenesis for Congenital Micrognathias
- Intraoral Distraction Osteogenesis
- General Procedures
- Combined Maxillary and Mandibular Surgery
- Rigid Internal Fixation in Orthognathic Surgery
- Functional Outcomes Following Orthognathic Surgery
 - Soft Tissue Changes Associated with Orthognathic Surgery
- Psychological Ramifications of Orthognathic Surgery
- Orthognathic Surgery Before Completion of Growth
- Maxillofacial Surgery for Treatment of Obstructive Sleep Apnoea
- Rehabilitation after Orthognathic Surgery

Essential investigation and Diagnostic procedures

1. Clinical evaluation by examination, inspection, palpation and models.
2. Radiological evaluation by the use of routine radiographs including OPG, PNS views, PA views etc and also evaluation with the use of Cephalograms and CT scans, MRI's, Ultrasonography etc.

Procedural and Operative Skills

Graded responsibility in care of patients and operative work (Structured training schedule): a structured program will be enforced to introduce the trainee to the evaluation and management of patients requiring orthognathic surgery.

The recognized center must be performing not less than 100 surgical procedures in the area per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of training period should have carried out/assisted at least 75 cases under the supervision of a senior specialist on all aspects of orthognathic surgery.

+Key:

O – Washed up & observed

A – Assisted a more senior surgeon

PA – Performed procedure under the direct Supervision of a senior specialist.

PI – Performed independently.

Surgical procedures:

Procedures	Category	Number
Genioplasty	PA + PI	7+3
Alloplastic augment	PA+PI	5+2
Lefort I	PA	10
BSSO	PA	10
VRO	PA	5
Segmental Osteotomy	A	5
Distraction Osteogenesis	A	10
Anterior Mandibular Subapical Osteotomy	A	5
Total Mandibular Subapical Osteotomy	A	3
Combined Maxillary and Mandibular Surgery	A	5

The above suggested categories level of training and number are minimal requirements. The students / teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in Oral Maxillofacial Surgery in DCI approved program.
2. Passed FDSRCS from the Royal College of Surgeons of England, Glasgow or Edinburgh.
3. Passed FFDRCSI from the Royal College of Surgeons of Ireland.

Requirements for Accreditation of an Institution:

The Department of Maxillofacial Surgery should have been in existence in the institution as an independent unit or as a part of the dental college and should have performed at least **100 orthognathic surgeries** in the previous year.

The Staff:

The director of the program should be an actively practicing and dedicated maxillofacial surgeon.

- **The unit should be headed by a person with a minimum of 10 years of post MDS experience who is attached to a 100 bedded multispecialty hospital with ICU or an exclusive 20 bedded maxillofacial surgery hospital with ICU.**
- **Should have done at least 250 major orthognathic surgical procedures.**

Teaching / Learning activities: The training program must include the following didactic activities:

1. Lectures by faculty not only in orthognathic surgery but also in related specialties like orthodontia, anesthesia, neurology, orthopedics etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a peer reviewed journal.

Participation in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks
- c. **Clinico-pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary team meeting a week to discuss management protocols for specific cases (co re specialist required are maxillofacial surgeon, orthodontist, prosthodontist, pedodontist, plastic surgeons, general surgeons, anesthesiologist, etc.
- e. **Community work:** camps/ field visits: It is important to improve awareness amongst the local population about the etiology and management of maxillofacial structural and functional deformities. The trainee shall learn to organize camps in various districts surrounding a health care and trauma center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: Ex: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.

Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (Oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Monitoring of teaching / learning activities

Methods:

1. Direct consultant to trainee interaction.
2. Maintenance of log book.
3. Formal quarterly review of performance.
 - a) Frequency
 - b) Schedules or checklists, log books diary.

Final Assessment to be submitted by the Director at the end of Programme to AOMSI.

Recommended books and journals:

1. Fonseca RJ Oral and Maxillofacial Surgery: Orthognathic Surgery 2nd Edition Volume 2 The University Of Michigan Elsevier Health Sciences Saunders 2000.
2. Reyneke JP Essentials of Orthognathic Surgery 2nd Edition Quintessence Publishing Co, Inc. Carol Stream 2003.
3. Miloro M, Ghali GE, Larsen PE, Waite PD Peterson's Principles of Oral and Maxillofacial Surgery 2nd Edition Volume 2 B.C. Decker Inc. Hamilton 2004.
4. Posnik JC Principles and Practice of Orthognathic Surgery: Principles and Practice 1st Edition Volume 1-2 St. Louis Elsevier Inc. Saunders 2013.
5. Henderson D Color Atlas and Textbook of Orthognathic Surgery: The Surgery of Facial Skeleton Deformity 2nd Edition The University of Michigan Mosby Year Book Medical Publishers 1999.
6. Mani V Orthognathic Surgery: Esthetic Surgery of the Face 1st Edition Jaypee Brothers Medical Publishers 2014.
7. Mc Carthy JG, Li M, Coleman JJ, Sadove AM Aesthetic Surgery of Craniofacial Skeleton: An Atlas 1st Edition New York Springer –Verlag New York Inc. 2012.
8. Epker BN, Stella JP, Fish LC Dentofacial Deformities: Integrated Orthodontic and Surgical Correction 2nd Edition Volume 3 Mosby January 1998.

Proposal for AOMSI Fellowship Program in Oral & Maxillofacial Oncology and Reconstructive Surgery.

- Introduction
- The need for a separate training program in Oral & Maxillofacial Oncology and Reconstructive Surgery
 - Magnitude of Oral and Maxillofacial cancer in India
 - Shortcomings in Oral and Maxillofacial oncology services in India.
 - The need for sub-specialization in Oral & Maxillofacial surgery.
 - Training in other countries
 - What would a separate training program in Oral & Maxillofacial oncology accomplish?
- Candidacy: Who would be ideal candidates for the training program?
- Institutional Requirements
 - Faculty
 - Other Personnel
 - Infrastructure
- Selection Process
- Structure of the program
 - Practical training: Areas of special emphasis
 - Clinical Oral and Maxillofacial oncology
 - Reconstructive surgery
 - Training in ancillary specialties
 - Cancer prevention and community oncology
 - Research
 - Teaching and Seminars
 - Evaluation at the end of the training

Introduction:

This proposal for a new Fellowship program in Oral & Maxillofacial Oncology outlines the need, candidacy, institutional requirement, selection process and structure of the training program. The overall goal of the training program is to generate surgeons with a firm grounding in the biologic basis of current oncological practice, technical expertise in advanced Oral and Maxillofacial ablative and reconstructive surgery and training in translational research.

The Need For a Separate Training Program in Oral & Maxillofacial Oncology-

The Magnitude of Oral and Maxillofacial Oncological Problem in India

Head and neck cancer, which arises from the upper-aerodigestive tract mucosa and associated structures, is one of the major causes of death and disfigurement in the Indian subcontinent (Fig 1). While it account for about 3% of all tumors around the world, in India it represent over 30% of all tumors. Amongst these, oral cancer has the largest numbers. These tumors share similar risk factors, biologic behaviors and treatment responses. Although it is considered as a disease of elderly caused by smoking, alcohol abuse, pan and gutka chewing, recent analysis of national cancer registries revealed that the median age of the disease is decreasing and increasingly being seen in individuals with no apparent risk factors.

The management of Oral malignancy has now evolved from a single specialty approach to multidisciplinary team approach, which consists of OMFS oncosurgery (trained surgeon) head and neck surgical oncology, radiation oncology, medical oncology and rehabilitation services. Along with in depth knowledge in one own specialty, it is necessary to have a working knowledge of other services for effective participation in multidisciplinary tumor boards and treatment formulation. Application of that multidisciplinary approach not only has helped to improve the survival rate, albeit modest, certainly made an impact in improving quality of life of the patients through several organ and function preservation strategies. Development of that multidisciplinary teamwork culture is mandatory for personnel involved in the management of head and neck cancer.

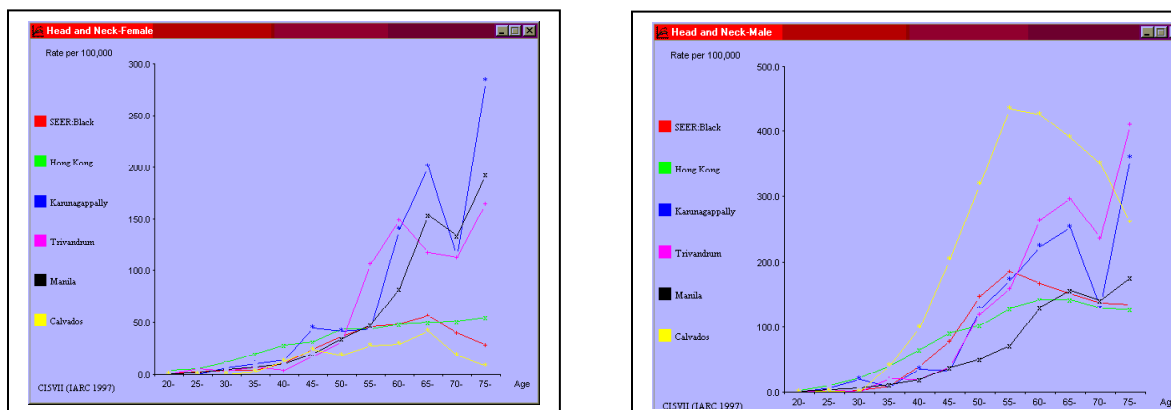


Figure 1

Shortcomings in OMFS oncology Surgical Services in India:

The various shortcomings in care for Oral cancer patients are summarized in the following table:

Requirements	Shortcomings	Reasons
Detection of oral cancer precancerous lesions	Less than 20% of head and neck cancers are detected at early stage (I and II).	Majority of oral and head and neck cancers are asymptomatic until late stage of disease. In addition, the lesions can mimic various benign inflammatory and infective conditions. Moreover, dental practitioners and ENT surgeons often miss the opportunity to detect asymptomatic lesions during routine clinical examinations.
Referral	Delayed and inappropriate referral	Limited knowledge of the nature of lesion often lead to inappropriate treatment and delay in diagnosis. With the lack of awareness of the head and neck oncology specialty, patients are often referred to general oncologists, surgeons or radiotherapists. This further delay initiation of treatment, and more often receives inappropriate treatment.
Treatment	Only a small proportion of referred patients receive	The type of treatment often depends on the specialist seeing the treatment.

	comprehensive treatment	Few institutions are with good standards of care and such care is too expensive for most people.
Prevention	No organized health education and cancer prevention program	A significant number of Oral cancers are caused by tobacco and alcohol abuse and are largely preventable. However, because of the limited number of specialists with interest in oral oncology, there is a general lack of commitment in health education and initiation of head and neck cancer prevention measures.
HealthCare Planning	No national conscientious policy for the treatment and prevention of oral cancer	Through various cancer registries around the country, the exact prevalence of oral cancer is now available. However no national policy currently exists regarding treatment regimens for individual sub-sites and stage of disease.

There is an urgent need to increase the number and quality of trained personnel in oral & maxillofacial oncology & reconstructive surgery. Recognized training programs exclusively dedicated to oral maxillofacial oncology & reconstructive surgery are to be established in a few selected institutions with good standards. This will help create a group of well-trained professionals in the comprehensive management of oral cancer.

The need for sub-specialization in Oral & Maxillofacial oncology:

There are several reasons why Oral & Maxillofacial oncology cannot be practiced effectively if combined with general surgical oncology or as part of ENT or Maxillofacial surgery. The complexity of the anatomy, the unique biologic behavior and need for multidisciplinary treatment warrants the need for a surgeons with specialization. Unlike other parts of the body, in the oral cavity and PNS region, equal emphasis should be given in both ablative as well as reconstructive surgery. Often these cancers are deemed unresectable because of lack of expertise for reconstruction. Moreover, in most cancer centers around the world, this treatment is coordinated by oral oncosurgeons. Therefore a thorough understanding of all aspects of the management of oral cancer, in addition to both ablative and reconstructive surgery is essential to be an effective Oral & Maxillofacial surgeon. This can be achieved only through a dedicated training program in Oral & Maxillofacial oncology.

In India, there are a limited number of training programs available in surgical oncology, where the focus is on the treatment of cancer of the entire body, without any attempt for regional specialization. The other surgeons with focused interest in the head and neck region (ENT and Maxillofacial surgeons), often lack time to spend any significant time to train in head and neck oncology during their training period. It is therefore essential to have a training program with focus on Oral & Maxillofacial oncology. Considering the high incidence of oral cancer in India, there is an immediate need for a large number of dedicated and well-trained oral surgeons.

The specific roles of the Oral & Maxillofacial oncologist can be summarized as follows:

1. **Clinical Oncology:** This includes clinical evaluation, endoscopy, decision making regarding the appropriate choice and sequence of treatment regimen, counseling and, follow-up of patients after treatment.
2. **Ablative surgery:** The surgeons should have extensive experience in surgical management of all tumors in these sub-sites, including various organ preservation and conservative surgical procedures and anterior skull base surgeries.
3. **Reconstructive surgery:** Reconstruction of complex head and neck defects require extensive training and experience. This includes the use of local, pedicled and microvascular free tissue transfer.
4. **Oral Cancer Screening and Prevention:** In majority of cases, oral cancer is caused by the abuse of tobacco and alcohol which are largely preventable. In addition with the implementation of an effective cancer detection program, it is potentially possible to down-stage the tumors thereby improving the cure rate and reducing the morbidity associated with the treatment.

What would a separate training program in Oral & Maxillofacial oncology accomplish?

A dedicated Oral & Maxillofacial oncology training program is expected to produce well-trained oral & maxillofacial oncologists specialized in the region. They will coordinate the overall management of oral cancer, a major health problem in the Indian subcontinent. In addition to treatment of established patients they will help to initiate community oncology program, with the aim to lower the stage of disease upon diagnosis and initiation of cancer prevention measures. The research component of the course is expected to provide basis for investigative framework to start research projects pertaining to specific problems encountered in India. Overall, this training program is expected to improve the care of oral cancer in India.

Candidacy for the Oral and Maxillofacial Oncology and Reconstructive surgery

Minimum Qualifications:

1. MDS (Oral and Maxillofacial surgery).
2. MS (ENT)

Duration: 24 months.

Number of Candidates per year: One/100 new cases or Two/175 new cases

Institutional Requirements

In general, the institution should have a comprehensive cancer center with

- 1.Linear accelerators or proper MOUs with other institutes(should show 100 cases of radiation therapy proof with the tied up unit during inspection)
- 2.CT-planning
- 3.Medical oncology services
- 4.Tumor registry
5. pain and palliation service
- 6.Facilities for rehabilitation.

The oral cancer service should handle no less than 100 new patients every year. The surgical service should undertake full spectrum of ablative surgery including that of anterior skull base and reconstructive surgery including microvascular free tissue transfer,(minimum of 30 per year) and distractions in case of benign tumours, rehabilitation including obturators,guiding flanges.

Accommodation: Free accommodation with stipend of 25000rs for I year and 28000 for II year

Faculty:

General Requirements

Course Director

A minimum of 13 years of experience in OMFS postgraduate teaching with relevant contribution(2 Publications in Indexed Journal, Course coordinators in International Conferences,Invited speakers in International conferences) to the speciality.Also proof of minimum 250 cases operated in the previous years.

Or

Prof in OMFS with Fellowship (minimum of 2 years) in OMF Oncology or Head and Neck Oncology from a recognized university in India or abroad with relevant contributions (2 Publications in Indexed Journal, Course coordinators in

International Conferences, Invited speakers in International conferences) to the speciality.

Faculties:

1.MDS – Oral and Maxillofacial surgery – 2 nos.

Part Time(Desirable)

2.MDS – Oral Medicine and Radiology – 1nos.

3.MDS – Oral Pathologist – 1nos.

4.MDS – Prosthodontist – 1 no.

5..MD – General Pathologist – 1nos.

6.MS – General Surgeon -1 no.

7.MS/DNB – ENT – 1 no.

8.Mch/DNB – Plastic surgeon – 1no.

9.Mch/DNB – Neurosurgeon – 1 no.

10.MD;DM – Medical Oncology – 1 no.

11.MD – Radiation Oncology – 1no.

12.Pain and palliative Specialist – 1no.

13.MD/DMRD - Radiodiagnosis – 1.

14.Anesthesiologist – 3 nos.

15.BDS – General Dentist – 1no.

Supportive Staffs:

1.Speech and swallowing therapist – 1

2. Medical social worker(MSW) – 1

All the associated staff proof to be submitted during inspection.

Infrastructure

Out patient clinic:

The out patient clinic should have the following facilities-

1. Flexible/Rigid laryngoscope with image capture facility
2. Facilities for Fine Needle Aspiration Cytology
3. Speech and swallowing therapy
4. The clinic should be designed for both new and follow up patients. In addition it is desirable to have a combined clinic for the following faculty members.

Multidisciplinary tumor board:

Multidisciplinary tumor board room should contain a minimum of 25 seating capacity with audio visual facilities and an attached library. The Library should contain textbooks on following subjects - Anatomy, Physiology, Biochemistry, Pathology, Oral pathology, Microbiology, pharmacology, Gen. Surgery, Gen. Medicine, Oral and Maxillofacial surgery, Medical Oncology, Radiation Oncology, Surgical Oncology, Head and Neck Oncology, Oral surgical Oncology, Cancer biology, Pain and Palliative medicine etc books.

A multidisciplinary tumor board with participation of Oral and Maxillofacial Oncologist, reconstructive/plastic surgeon, (General pathologist, Oral Pathologist, Prosthodontist, General Surgeon, ENTsurgeon, Neurosurgeon, Medical Oncologist, Radiation Oncologist, Pain and palliative therapist, and Radiologist are desirable for effective management of head and neck cancer patients. The fellow trainee should present all new cases in this tumor board and derive at a comprehensive treatment plan after discussing with all the board members.

Operating Room

1. Major Operating Room – 2

General surgical equipments

- a. Surgical Microscope – 1
- b. Surgical Laser - 1
- c. Fibro Optic Intubation set – 1 adult, 1 paediatric.
- d. Surgical saw – 1 set.
- e. Drill and bone plating system – 2 sets
- f. Pathology service with frozen section
- g. Tracheostomy set – 2 sets
- h. Skin graft set – 1
- defibrillator – 1 no.

2. Minor Operating Room – 1

a. General surgical equipments

- a. Tracheostomy set – 1 no.**
- b. Defibrillator – 1 no.**

Inpatient Services:

1. ICU – 5 Beds and 3 Ventilators(2 adult vent. and 1 paediatric vent.)
2. Males – 10 Beds/fellow or 15Beds/2 fellows
3. Females – 10beds/fellow or 15Beds/2 fellows
4. Paediatric – 2beds
5. Pain and Palliative – 2beds.
6. general ward should also have one tracheostomy set, and one defibrillator

Selection Process:

The candidates for the fellowship programme can be selected by the centres on their own/AOMSI IBOMS by the method of transparency.

Proposed Structure of the Training Program:

- Practical training: Areas of special emphasis
 - Clinical oral oncology
 - Reconstructive surgery
 - Training in ancillary specialties
 - Cancer prevention and community oncology
- Teaching and Seminars
- Exchange program with other Institutions
- Evaluation at the end of the training

Practical Training:

Clinical Oral Oncology:

Out patient evaluation in the Oral oncology clinic:

Fellows should evaluate and plan the care and follow-up of patients referred to the clinic for outpatient evaluation. The outpatient evaluation should serve the important purpose of acquisition of clinical skills under the guidance of faculty.

Multidisciplinary Tumor Board

The fellow should present the patients at the multidisciplinary tumor board and should develop a treatment plans in consultation with other faculty members.

In patient care:

The fellow should provide care of patients admitted in the wards under the supervision of the faculty. This should also include care of convalescing postoperative patients. The faculty should provide formal teaching and supervision of patient care.

Intensive Care:

The fellow should be directly responsible for the management of all ICU patients. This requires thorough familiarization with principles of critical care monitoring, management and invasive procedures. Care of ventilated patients should be provided in concert with the anesthesiologist on call. The faculty and the anesthesiologist should provide direct supervision and teaching during daily rounds.

Didactic Teaching and Seminars:

A comprehensive teaching program syllabus should be in place prior to the initiation of the fellowship program in Oral & Maxillofacial oncology. A proposed syllabus and weekly work schedule are attached as appendix. The *core curriculum* should cover all basic and applied areas of the sub specialty. The teaching could be in the form of didactic lectures, seminars and discussions. Regular *journal clubs* should be incorporated into the teaching program once a week, in order to keep abreast with developments in the field. *Seminars* on important basic and applied topics will need to be presented by the fellow every fortnight. The fellow should also present weekly *pre-operative conferences* where the clinical, imaging and pathology data of all prospective surgical patients are discussed. In addition the fellow should present the clinical intraoperative findings at the *clinico-pathology conference*. The fellow should attend at least one head and neck oncology/ oncology *national conference* every year. The fellow should be encouraged to present his/her research data at these meetings.

Rotation among institutions:

The trainees should be encouraged to spend time at other institutions with oral surgical oncology training program to enable maximal benefit from the strengths of each program. In particular, rotation to centers of excellence in microvascular surgery should be encouraged. Specific details will need to be worked out after the individual programs are in place.

Evaluation at the end of the training:

There should be an examination at the end of training period. The evaluation process should be comprehensive and should test theoretical knowledge as well as the practical skills required to practise oral and maxillofacial surgical oncology. The candidates should maintain a logbook of all surgical procedures performed during training.

PROPOSED CORE CURRICULUM

OBJECTIVES: The objective of the training program in Oral and Maxillofacial Oncology is to provide a comprehensive training in management of all facets of cancer including ablative and reconstructive surgery, fundamentals of radiation oncology and medical oncology, cancer biology and research methods. This is accomplished by providing outstanding clinical training (including both decision-making and technical expertise), encouraging teaching, and developing a scientific and investigative framework for research. The emphasis will be on providing state-of-the-art multidisciplinary care for patients with head and neck cancer and to provide a rigorous academic experience. At the end of the training period the candidates are expected to have an in-depth knowledge, skills and attitude to take up academic career in Oral and Maxillofacial oncology and leadership positions in the field. The duration of the training period will be for 24 months.

SUMMARY:

The core curriculum includes basic tumor biology, pathology, anatomy, molecular biology and genetics, clinical research methods, radiation oncology, medical oncology and different aspects of Oral and Maxillofacial oncology.

To attend weekly interdisciplinary Tumor Board

Elective rotations (one month) in radiation oncology, medical oncology, pathology, ENT, neurosurgery, speech and swallowing therapy, pain and palliation and prosthetics.

DETAILED SYLLABUS

The training will have three parts extending over a period of 24 months.

Part I: Lectures on basic sciences.

Molecular cell biology of cancer – the cell cycle regulations, oncogenes, chromosomal abnormalities-

1. Genetics
2. Epidemiology of cancer
3. Mechanism of Carcinogenesis
4. Biologic therapy
5. Gene-therapy
6. Principles of radiation therapy.
7. Principles of chemotherapy.
8. Clinical Research Methods
9. Head and neck radiology
10. Applied head and neck anatomy
11. Developing hypothesis and planning research project
12. Designing a clinical research project
13. Data collection and monitoring
14. Biostatistics primer
15. Ethics in biomedical research
16. Securing research grants

Part II: Didactic course in Oral and Maxillofacial oncology

1. Lip and oral cavity
2. Oral mucosa in health and disease
3. Benign cysts and tumors of the jaw
4. Management of Mandible
5. Oropharynx
6. Paranasal sinus
7. Parapharyngeal space
8. Salivary gland
9. Anterior skullbase
10. Management of Neck

Part III: Didactic and laboratory course in reconstructive surgery

1. Basic plastic surgery principles
2. Reconstruction of soft tissue defects of face
3. Nose reconstruction
4. Lips reconstruction
5. Oral cavity reconstruction
6. Mandible reconstruction
7. Skull base reconstruction
8. Prosthetic rehabilitation

Part IV: Didactic and clinical training in pain and palliation

1. Management of cancer pain
2. Specialized care of the terminally ill.
3. Nutritional support.

Part V: Rehabilitation

1. Speech and swallowing therapy
2. Maxillofacial prosthetics

Part III: Clinical work including surgery, daily patient management, management of patients on radiotherapy and chemotherapy and palliative care for advanced head and neck malignancy patients.

1. Once a month inter disciplinary seminar
2. Fortnightly journal club presentation.
3. Tumor board meetings once a week.
4. Attendance to at least one oncology conference every year.
5. Maintenance of a log book reflecting cases worked up, planned, assisted, performed, with details of adjunctive therapy (chemotherapy, RT and palliative care).

MODEL WEEKLY TRAINING SCHEDULE

MONDAY		TUESDAY			WEDNESDAY		THURSDAY			FRIDAY		SATURDAY
CLINICS	THEATRE	CLINICS	THEATRE	DIDACTIC	CLINICS	THEATRE	CLINICS	THEATRE	DIDACTICS	CLINCS	THEATRE	DIDACTIC
				JOURNAL CLUB	MULTI DISC.				CLINICO-PATH			CORE CURRICULUM

Surgery – OMFO: Head and Neck oncology; Ablations/PRS: Plastic and Reconstructive Surgery/CRF: Craniofacial Surgery

Multi Disc. Tumor Board followed by Multi Disciplinary Clinic with head and neck surgeon, radiotherapy, medical oncology and rehabilitation

Clinico Path. Joint meeting with pathologists and surgical team

OUTLINE OF THE TRAINING PROGRAM:

6 months	1 month each Department	3 months	1 – 3 months	9 months	
Oral and Maxillofacial Oncology /Microvascular surgery and skull base surgery	Rotation in Neurosurgery Radiation oncology/ Medical Oncology	Oral and Maxillofacial Oncology /Microvascular surgery and skull base surgery	Postings in other institutions.	Microvascular surgery and skull base surgery	

Recommended Journals:

1. Journal of Oral oncology.
2. Otolaryngol Head and neck surgery.
3. New England journal of medicine.
4. Journal Of Clinical Oncology.
5. Journal of Head and Neck Oncology.
6. Radiation Oncology.
7. International journal of Oral and Maxillofacial surgery
8. International j Radiation Oncol Biol and physics.
9. Lancet.
10. American J Otolaryngology.

Practical Examination:

Will comprise of Case Presentations and Viva Voce

	Duration in	Distribution	Total number of Marks
Case Presentation	3	1 Long Case 2 Short Cases	100
Viva Voce	1	-----	50
Log Book Assessment		-----	50

Examiners:

Two Examiners: One Internal and Two External

Examination results:

- The fellow has to satisfy the examiners and score at least fifty percent of the marks in the theory and practical individually.
- The fellow who shows exceptional merit will be awarded distinction. (More than 75% marks)

References

[Head and Neck Surgery and Oncology, Third Edition](#)
by Jatin P. Shah

[Head and Neck Cancer: A Multidisciplinary Approach](#)
by Louis B. Harrison

[Cancer of the Head and Neck](#)
by Jatin P. Shah

[Head and Neck Cancer: Multimodality Management](#)
by Jacques Bernier

[Radiotherapy for Head and Neck Cancers: Indications and Techniques](#)
by K. Kian Ang and Adam Garden

[Head and Neck Cancer Imaging \(Medical Radiology / Diagnostic Imaging\)](#)
by Robert Hermans and Albert L. Baert)

[Radiotherapy for Head and Neck Cancers: Indications and Techniques](#)
by K. Kian Ang and Adam S. Garden

Cancer of the Head and Neck
by Eugene N. Myers and James Y. Suen

Rehabilitation of the Head and Neck Cancer Patient: Psychosocial
Aspects
by Andrew Blitzer

[Grabb and Smith's Plastic Surgery \(GRABB'S PLASTIC SURGERY\)](#)
by Charles H. Thorne, Scott P. Bartlett, Robert W. Beasley and
Sherrell J. Aston

Proposed Names of Inspectors for Fellowship Program in Oral & Maxillofacial

Oncology & Reconstructive Surgery

DR.PAUL SEBASTIAN
REGIONAL CANCER CENTER
THIRUVANANTHAPURAM

DR SUBRAMANIYA IYER
HOD DEPARTMENT OF PLASTIC SURGERY
AMIRTA INSTITUTE OF MEDICAL SCIENCES KOCHI KERALA

DR MONI ABRAHAM KURIAKOSE
HEAD OF SURGICAL ONCOLOGY
CHIEF HEAD AND NECK SURGERY
MUZUMDAR SHAW CANCER CENTER
BANGALORE

DR GEORGE PAUL
DIRECTOR
SHARON CANCER CENTER
FAIR LANDS SALEM

DR ASHOK SHENOY
KIDWAI INSTITUTE OF ONCOLOGY
BANGALORE

DR SABITHA
HEAD OF ORAL OCOLOGY KIDWAI INSTITUTE OF ONCOLOGY
BANGALORE

DR SHILPA CHATNI
CANCER CENTER
NAVANAGAR HUBLI

DR ARUN P
TATA MEMORIAL CENTER
KOLKATTA

DR ARAVIND KRISHNAMOORTHY
CANCER INSTITUTE (WAI)ADYAR
CHENNAI

DR AZEEM MOIDEEN
CHIEF OF HEAD AND NECK
KOLAR INSTITUTE OF MEDICAL SCIENCES
KOLAR

DR ANIL D CRUZ
TATA MEMORIAL HOSPITAL
MUMBAI

DR.VIJAY DESHMUK
DR.BORLE
DR.SANJIV NAIR

Fellowship in cleft lip & Palate surgery

Goals:

To establish a comprehensive training program for maxillofacial surgeons in the management of Cleft Lip & Palate care.

Objectives:

Knowledge: The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip & Palate, Prerequisite Measure if any, diagnosis and appropriate investigation to support the diagnoses at different stages in the development and growth of the child with Cleft Lip & Palate anomaly or other developmental craniofacial deformity. Complete knowledge of all aspects of the management of this complex deformity including the concept of team management with interaction between other associated specialties like orthodontics, Pediatric dentistry, Speech therapy, ENT, etc.

Skills & Attitudes: The trainee should, at the end of one year, be able to provide seamless care in all aspects of Cleft Lip & Palate surgery from birth till adulthood. The specific surgical skills required are

1. Primary cleft Lip repair.
2. Primary cleft palate repair.
3. Secondary alveolar bone grafting.
4. Pharyngoplasty.
5. Secondary Lip repair.
6. Secondary palate repair.
7. Orthognatic surgery including Le Fort I osteotomy and any other skeletal surgery as may be required.
8. Distraction osteogenesis.
9. Rhinoplasty.
10. Flexible fiberoptic nasobronchoscopy to evaluate velopharyngeal function
11. Other surgical skills required in the Management of more extensive facial deformities.

The trainee should develop a compassionate attitude towards dealing with both the cleft children and the parents and relatives.

Communication abilities:

It is essential to develop skills required to maintain a harmonious working relationship with all the specialists involved such that the principles of good team management can be established.

Course contents (syllabus):

Essential knowledge: The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip & palate anomaly or other developmental craniofacial deformity.

Complete knowledge of all aspects of the management of this complex deformity including the concept of team management with interaction between associate specialties like orthodontics pediatric dentistry, speech therapy, ENT, etc.

Skills & Attitudes: The trainee should, at the end of year, be able to provide seamless care in all aspects of Cleft Lip & palate surgery from birth till adulthood. The specific surgical skills required are:

1. Primary cleft lip repair.
2. Primary cleft lip repair.
3. Secondary alveolar bone grafting.
4. Pharyngoplasty.
5. Secondary lip repair.
6. Secondary palate lip repair.
7. Orthognathic surgery including Le Fort I osteotomy, mandibular osteotomy and any other skeletal surgery may be required.
8. Distraction osteogenesis.
9. Rhinoplasty.
10. Other surgical skills required in the management of more extensive facial deformities.

Essential investigation and diagnostic procedures:

1. Flexible fiberoptic nesenboscropy to evalua velo-pharyngeal function.
2. Evaluation of CT scan angiogram, MRI etc, as required.

Procedural and operative skills

Graded responsibility in care of patients and operative work (structured training schedule):a structured program will be enforced to introduce the trainee to the evaluation and management of cleft lip & palate deformities.

The recognized cleft center must be performing not less than 200 surgical procedures in the area of cleft lip & palate surgicals procedures in the area of cleft & palate surgeries per annum in order to be able to provide sufficient training material for the fellowship candidate.

Each fellow at the end of 1 year should have carried out at least 50 cases under the supervision of a senior specialist on all aspects of cleft surgery.

+key: o—washed up & observed

A—Assisted a more senior surgeon

PA—Performed procedure under the direct supervision of a senior specialist.

P1—performed independently.

Surgical procedures:

Procedures	category	Number
Unilateral cleft lip	PA	15
Bilateral cleft lip	PA	5
Cleft palate	PA	15
Secondary Alveolar Bone grafting	PA	10
Cleft osteotomies	PA	5
Pharynplasties	A	5
Secondary lip repair	A	5
Secondary palate repair	A	5
Distraction Osteogness	A	3
Cleft rhinoplasty	A	5
Fiberoptic nasendoscopy	PA	5

The above suggested categories level of training and number are minimum requirements. The students/Teachers are encouraged to advance these further to the best of their abilities and also strive to gain experience in many procedures that are not listed.

Eligibility criteria for candidates:

The candidates applying for fellowship should have successfully completed either of the following:

1. MDS in oral Maxillofacial Surgery in DCI approved program.
2. DNB in Maxillofacial surgery recognized by the DCI.
3. Passed FDSRCS from the Royal College OF Surgeons of England, Glasgow or Edinburgh.
4. Passed FFDRCSI from the Royal College of surgeons of Ireland.

Duration: 12 months

Requirements For accreditation of an institution:

The department of Maxillofacial Surgery should have been in existence in the institutions as an independent unit or as a part of the dental college. Should have performed at least 200 major maxillofacial surgical procedures related to cleft lip & palate surgeries in the previous year.

The staff:

The director of the program should be an actively practicing and dedicated maxillofacial surgeon

- Should have done at least 500 major surgical procedures related to cleft lip & palate surgery
- Should have post-graduate degree in maxillofacial surgeon with at least 8 years of continuous
- Should be a post graduate teacher for an MDS program in Oral & maxillofacial surgery.

Should have taken part and presented papers in National and International Maxillofacial & cleft surgery conferences

Teaching / Learning activities: The training program must include the following didactic activities:

1. Lectures by faculty not only in maxillofacial surgery but also in related specialities like orthodontics, speech therapy, ENT, etc.
2. Every fellow would have to develop and complete at least one research project which could be either clinical or lab based, preferably leading to either a presentation or publication in a peer reviewed journal.

Stipend: Rs.25000/- per month

Participation in departmental activities:

- a. **Journal reviewed meetings:** One session every two weeks.
- b. **Seminars:** One session every two weeks.
- c. **Clinico pathological conferences:** Not essential
- d. **Inter departmental meetings:** One multi- disciplinary cleft team meeting a week to discuss management protocols for specific cases (core specialist required are maxillofacial surgeon, orthodontist, plastic surgeons and speech therapists. Other specialist who form second tier are pedodontist, ENT, dentist, Social worker, psychologist, pediatrician, etc.
- e. **Community work-camps /field visits:** It is important to improve awareness amongst the local population about the etiology, prevention and management of cleft deformities. The trainee shall learn to organize camps in various districts surrounding the cleft center. Follow up field visits are also essential.
- f. **Clinical rounds:** Daily two rounds shall be held, at least one of which will be led by the consultant.
- g. **Any other:** Trainees will be encouraged to publish papers in peer reviewed journals.

Orientation program: EX: a) Use of library, b) Laboratory procedures, c) National programs, d) Any other: Not essential.

Training and teaching skills and research methodology:

Trainees will be encouraged to participate in teaching activities related to MDS (oral Maxillofacial Surgery). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Monitoring teaching/learning activities

- a) Methods
 1. Direct consultant to trainee interaction.
 2. Maintenance of log book.
 3. Formal quarterly review of performance.
- b) Frequency c) schedules of checklist, log book dairy.

University Examination

There shall be one therapy paper of three hours duration carrying 100 marks. Clinical examination would also be for 100 marks and viva voce would be for 50 marks/. A candidate has to score a minimum of 50% for passing the examination.

Scheme of examination:

- a) Written: One clinical paper covering cleft lip & palate management.
- b) Clinical examination: 2 case presentations with discussion on diagnoses, treatment plan and management.
- c) Viva-voce- 1 viva of 1 hour duration can be held to complement the written and clinical examination.

Examiners: - 3- one internal

Two external appointed by AOMSI fellowship committee.

Recommended books and journals:

1. Multidisciplinary management of cleft lip and plate by bardach and Morris.
2. Atlas of cleft and craniofacial surgery by salyer and bradach.
3. Plastic surgery by McCarthy.
4. Cleft lip & palate by Berkowitz
5. Cleft palate & craniofacial Journal.
6. Plastic reconstructive surgery journal.
7. Journal of craniomaxillofacial surgery.



Annexure IV

Curriculum for Fellows including case expectation

Curriculum details are in AOMSI fellowship program details