

Title of the course: Fellowship in Cleft Lip and Palate Surgery

Preamble:

Clefts anomalies are one of the most commonly seen congenital anomalies. With valuable support from various non-profit organizations, centers of excellence in the management of cleft and craniofacial anomalies are developing at rapid pace all over the world. Multidisciplinary approach in the management of cleft and craniofacial anomalies is essential. Various surgical, medical, dental and speech and language specialties are involved in this holistic management of cleft patients. The complete rehabilitation of an individual with these deformities begins from the time of its detection, which could be in its intra uterine life, to the time well into his adulthood. Diagnosis and management skills need to be taught to surgeons interested in this branch of surgery. This fellowship program aims at empowering surgeons in providing complete and scientific surgical treatment to individuals suffering from these anomalies.

Objectives:

- To orient the fellow towards the acquisition of technical skills required in craniofacial surgery and its pre-operative planning.
- To inculcate the idea of multidisciplinary approach in the rehabilitation of the individuals with cleft and craniofacial anomalies.
- To expose the fellow to the basic knowledge in the other specialties involved in the management of cleft and craniofacial anomalies like, Orthodontics, Otolaryngology, Speech, and Language Pathology, Pediatrics and Pediatric and General Dentistry.
- To involve the fellow in research activities involving surgical and supportive management of cleft and craniofacial anomalies.
- To support the fellow to undertake research in genetics, etiopathogenesis and epidemiology of cleft and craniofacial anomalies.
- To involve the fellow in community-based rehabilitation activities for individual with cleft and craniofacial anomalies.

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- To evolve the fellow into a specialist cleft and craniofacial surgeon well versed with basic skills and well oriented with advance skills in the holistic management of cleft and craniofacial anomalies.

Goal of the program is to establish a comprehensive training to enable the maxillofacial surgeon/Plastic surgeon/ ENT surgeon to gain Proficiency in confidently treating and managing cases of cleft lip and palate in different stage i.e. birth to adulthood.

Duration: One Year

Annual intake: One Fellow per academic year

Eligibility:

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

1. MDS in Oral and Maxillofacial Surgery in DCI approved college.
2. DNB in Maxillofacial Surgery recognized by the DCI.
3. FDSRCS from the Royal College of Surgeons of ENT England, Glasgow or Edinburgh.
4. FFDRCSI from the Royal College of Surgeons of Ireland.
5. ENT / Plastic Surgeon

Fee: As per University policy

Selection method: Entrance Examination conducted by the University

Faculty:

Course Director: Dr. Kumar Nilesh (Mishra)

Professor and Head of Department

Dept. Of Oral and Maxillofacial Surgery

Course Co-ordinator: Dr. Mouneshkumar CD (MDS, OMFS)

Dr. Prahant Punde (MDS, OMFS)

Dr. Pankaj Patil (MDS, OMFS)

Dr. Jinesh Patel (MDS, OMFS)

Contributing departments:

Dept. of Maxillofacial Surgery, Dept. of Plastic Surgery, Dept. of Orthodontics, Dept. of ENT, Dept. of Speech Therapy, Dept. of Pediatrics, Dept. of Pedodontist

Infrastructure:

- 100 Bed hospital
- Minimum 2 operating theatres
- 10 bed ICU
- 5 bed pediatric ICU
- Existing Dental College or Medical college where MCH is available

Medium of instruction: English

Attendance: Minimum 80%

Syllabus / course content (semester wise):

Essential Knowledge:

- 1) The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip and Palate, Preventive measures, Diagnosis at different stages.
- 2) Genetics & Pre and Post natal growth and development of craniofacial complex in CLP and other craniofacial deformities.
- 3) Management of complex craniofacial deformities and Cleft lip and palate surgeries.
- 4) Concept of Team management or multidisciplinary team approach with other interacting specialties like Orthodontics, Pedodontics and Speech therapist, ENT.
- 5) The trainee should be able to provide seamless care in all aspects of cleft lip and palate from birth till adulthood.
- 6) Specific Surgical Skill required are
 - a) Primary cleft lip repair
 - b) Primary cleft palate repair
 - c) Secondary alveolar bone grafting
 - d) Pharyngoplasty
 - e) Secondary lip repair
 - f) Secondary palate repair
 - g) Orthognathic Surgery including Le Fort I osteotomy, mandibular osteotomy and any other skeletal surgery as may be required.

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- h) Distraction osteogenesis
- i) Rhinoplasty
- j) Other surgical skills required in the management of more extensive facial deformities.

Essential Investigation and diagnostic procedures:

- Use of Flexible fiberoptic nasoendoscopy to evaluate velopharyngeal function.
- Evaluation of CT scan angiogram, MRI etc, as required.

Procedural and operative skills (Structured training schedule):

A structured programme will be charted out to introduce the trainee to the evaluation and management of Cleft lip and Palate deformities. 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 aspect of cleft surgery.

Surgical Procedures:	Number
Unilateral Cleft lip	15
Bilateral cleft lip	5
Cleft palate	15
Secondary alveolar Bone Grafting	10
Cleft osteotomies	5
Pharynoplasties	5
Secondary lip repair	5
Secondary palate repair	5
Distraction osteogenesis	3
Cleft rhinoplasty	5
Fibreoptic nasendoscopy	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.

Knowledge:

The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip & Palate.

- a) Etiology , Diagnosis, Prevention, Treatment modalities
- b) Growth & Development of Craniofacial skeleton

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- c) Understand the Concept of team management approach & Interaction with other faculties like Orthodontics, Pediatric Dentistry/ Speech therapy, ENT, Child Psychology, Pediatrician, Plastic Surgeon and Social Workers.

Skills and Attitude:

At the end of this fellowship Programme the trainee should have sufficient knowledge to perform specific surgical procedures and skills and to provide harmonious care in all aspect of Cleft Lip and Palate Surgery from birth till adulthood. Also, the trainee should develop a compassionate attitude towards dealing with both the Cleft children and the parents and relatives.

Communication abilities:

The trainee should be able to develop and maintain a harmonious relation with all interrelated specialties such that principles of good Team management can be established.

Course content/curriculum	
<p>Facial cleft: Introduction 1. History 2. Epidemiology Anatomy and pathology</p> <ul style="list-style-type: none"> • Normal anatomy and embryology of craniofacial complex • Embryogenesis cleft lip and palate and craniofacial anomalies • Genetics: syndromic and non-syndromic • Post-natal craniofacial growth and development • Anatomy in cleft lip and palate and craniofacial anomalies • Facial growth in cleft lip and palate <p>Classification:</p> <ul style="list-style-type: none"> • Cleft lip and palate • Rare cleft • Other craniofacial anomalies <p>Unilateral cleft lip deformity</p> <ul style="list-style-type: none"> • Anatomy • Management • Pre surgical orthopaedics 	<p>Othrodontics in cleft lip and palate:</p> <ul style="list-style-type: none"> • Maxilla • Mandible • Dentition • Cephalometry <p>Rare craniofacial clefts:</p> <ul style="list-style-type: none"> • Incidence • Embryogenesis • Classification • Management <p>Principles of craniofacial surgery:</p> <ul style="list-style-type: none"> • Organization of team • Orbital hyper telorism • Assessment and planning surgical correction <p>Craniosynostosis:</p> <ul style="list-style-type: none"> • Etiopathogenesis • Evaluation • Management- Early surgery Late surgery <p>Craniofacial microsomia:</p>

<ul style="list-style-type: none"> • Evolution of surgery • Lip adhesion • Techniques of lip repair • Primary nasal correction • Secondary lip deformities • Secondary surgeries • Corrective rhinoplasty <p>Bilateral cleft lip deformity:</p> <ul style="list-style-type: none"> • Anatomy • Management • Pre surgical orthopaedics • Evolution of surgery • Lip adhesion • Techniques of lip repair: • Management of pre maxilla • Primary nasal correction • Secondary lip deformities • Secondary surgeries • Corrective rhinoplasty <p>Cleft palate deformity:</p> <ul style="list-style-type: none"> • Anatomy • Feeding • Management • Timing of surgery • Techniques of repair • Prosthodontic obturator • Alveolar bone grafting • Management of palatal fistula <p>Velopharyngeal incompetence:</p> <ul style="list-style-type: none"> • Assessment • Management • Pharyngeal flaps • Pharyngoplasty • Other methods 	<ul style="list-style-type: none"> • Embryology • Etiopathogenesis • Clinical spectrum • Evaluation • Management <p>Craniofacial syndromes:</p> <ul style="list-style-type: none"> • Treacher Collin syndrome <ul style="list-style-type: none"> ➤ Dysmorphology ➤ Evaluation ➤ Management • Pierre robin sequence <ul style="list-style-type: none"> ➤ Dysmorphology ➤ Evaluation ➤ Management • Romberg’s disease <ul style="list-style-type: none"> ➤ Etiopathogenesis ➤ Clinical aspect ➤ Management • Klippel fiel syndrome: <ul style="list-style-type: none"> ➤ Etiopathogenesis ➤ Clinical aspect ➤ Management <p>Orthognathic surgery:</p> <ul style="list-style-type: none"> • Historical perspective • Dental occlusion • Treatment planning (Cephalometry, Radioimaging, Model surgery) • Orthodontic consideration: • Surgical correction <p>Osteotomies:</p> <ul style="list-style-type: none"> • Maxillary • Mandibular • Distraction osteogenesis
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Schedule:

A total of 48 working hours a week which will be distributes as follows:

Out-patient department: 3 hours thrice a week

Operative sessions: 7 hrs thrice a week

Inpatient work:

Regular rounds- 1 hr five days a week

Grand round- 3 hrs once a week

Academic activities:

Seminar: 1.5 hrs twice a month

Case discussion: 1.5 hrs twice a month

Journal club: 1.5 hrs twice a month

Research activity: 4 hrs in a week

Community activity: 12 hrs in a month

Case planning, modeling, moulage, model surgery, cephalometric analysis: 3 hrs in a week

Teaching-learning method:

The training program includes the following activities:

- a) Lectures by faculty not only in maxillofacial surgery but also in related specialities like orthodontics, speech therapy, ENT etc.
- b) 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 a publication in a peer reviewed journal.
- c) Journal reviewed meetings: One session every two weeks.
- d) Seminars: One session every two weeks.
- e) Inter departmental meetings: One multi-disciplinary cleft team meeting a week to discuss management protocol for specific cases (core specialists required are maxillofacial surgeon, orthodontist, plastic surgeons and speech therapists. Other specialists who form second tier are Pedodontist, ENT, Dentist, Social worker, Psychologist, Pediatrician, etc.
- f) Community work camps/ field visits: To organize camps in various districts to improve awareness amongst the local population about the etiology, prevention and management of cleft deformities.
- g) Clinical rounds: Daily two rounds shall be held, at least one of which will be led by the consultant.
- h) Any other: Trainees will be encouraged to publish papers in peer reviewed journals.
- i) Trainees will be encouraged to participate in teaching activities related to MDS (Oral Maxillofacial Surgery).
- j) Encourage the trainee to participate in teaching activities.
- k) Attendance of workshop on research methodology
- l) Independent research project to be completed under supervision

- m) Maintenance of log book format. Quarterly review of performance /Internal Assessments

Monitoring of Teaching / Learning activities:

Methods:

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

Assessment pattern:

Periodic assessment in the department (at 6th month of the fellowship calendar)

Theory	2 clinical Paper	100 Marks
Clinical Examination	2 case presentation with discussion on Diagnosis & Treatment planning.	100 Marks
Viva Voce	-	50 Marks

Theory examination

Will comprise of two papers of 100 marks each the first paper will be on cleft lip and palate and the second paper will cover craniofacial surgery and allied subjects like orthodontics, otolaryngology, speech, language, pathology, pediatrics, general and pediatric dentistry.

Subject	Duration in hrs	Long question	Short question	Total
Paper 1: cleft lip and palate	3	20x2=40	10x6= 60	100
Paper2: craniofacial surgery and allied subjects	3	20x2=40	10x6= 60	100

Credit system: as per Credit based University protocol

Log book: Log book to be maintained for evaluation of the following:

- Interpersonal and communication skills
- Medical knowledge
- Patient care

- Clinical acumen
- Surgical skills
- Practice based learning and improvement
- Professionalism
- Attendance and availability
- Enthusiasm and responsiveness

Text/Reference books:

	Name of the textbook	Author	Publisher
1	Cleft craft: vol 1,2&3	D. Ralph Millard Jr	Lippin cott William& wilkins
2	Plastic surgery: vol 4 Pediaticr plastic surgery	Mathes S J.	W.B Saunders company & co.
3	Plastic surgery , Vol 2 The head & neck part 1	Stephen j. ,Mathes	W.B Saunders company & co
4	Multidisciplinary approach for management of cleft lip and palate	Kennet E salyer, Janusz bardach	Lippin cott William& wilkins
5	Atlas of craniofacial and cleft surgery	Kennet E salyer, Janusz bardach	Lippin cott William& wilkins
6	Grabb& smith’s plastic surgery		Lippin cott William& wilkins
7	Oral and maxillofacial surgery: Cleft craniofacial & cosmetic vol 6	Raymond fonseca	W.B Saunders company & co
8	Radiographic cephalometry from basic to videoimaging	Alexander jacobson	Quintessence publishing
9	The surgical technique for the unilateral cleft lip – nasal deformity	M. Samuel noordhoff	Thieme Medical publisher
10	Cleft lip & palate – Diagnosis and management	Berkowitz	Quintessence publishing
11	Management of cleft lip and palate	Wtason C.H	WHURR. Publisher
12	Cleft lip and speech	Muriel & Morley	Australasian medical publishing and company
13	Cleft palate- the nature & remediation of communication problems	Jackie stengelhofen	Singular publishing Group

Additional reading:

Recommended Books and Journals:

- Multidisciplinary management of cleft lip and palate by Bardach and Morris
- Atlas of cleft and craniofacial surgery by Salyer and Bradach
- Plastic surgery by McCarthy
- Cleft lip and Palate by Berkowitz
- Cleft palate and craniofacial Journal
- Plastic reconstructive surgery Journal
- Journal of Craniomacillofacial Surgery
