

DEPARTMENT OF ORTHODONTICS AND DENTOFACIAL ORTHOPAEDICS

POST DOCTORAL FELLOWSHIP PROGRAMME IN CLEFT ORTHODONTICS

SYLLABUS

Course contents:

Essential Knowledge :

The trainee should acquire detailed knowledge pertaining to the cases of cleft lip and palate, preventive measure if any, diagnoses at different stages in the development and growth of the child, cleft lip and palate anomaly or other developmental craniofacial deformity. Complete deformity including the concept of team management with interaction between associated specialities like Orthodontics, Paediatric dentistry, Speech therapy, ENT, etc.

Introduction to cleft orthodontics

- Importance of orthodontics in cleft
- Distribution of the topics of journal club & Seminars
- Goslon index for cleft and practice on the study model
- MDT clinics
- Surgical demonstration of lip repair on patient

Growth and Development

- Role of lip repair and palate repair on growth and development
- Genetics
- Psychology
- Etiology of cleft
- Eurocleft
- Various protocols for cleft
- Classification of cleft
- MDT clinics
- Surgical demonstration of palate repair on patient

Presurgical Naso – alveolar Molding

- Introduction, History, Importance of pediatric evaluation, various impression procedures, fabrication of the appliance by Grayson technique, Taiwan technique, modified technique of this department, Genetic counseling, Feeding issues in cleft infants, Dutch cleft studies, Treatment outcome of UCLP on Goslon mata- analysis, Comp0lications and controversies in PNAM, Long term evaluation of the 3D nasal symmetry after PNAM, Comparison of the patient treated with PNAM and with Surgery alone, Management of Premaxilla in BCLP cases.

Alveolar Bone Grafting

Classification and types, Radiographic assessment of cleft defect and bone graft, Surgical technique and Autogenous bone graft, Allogenic materials, Systematic review, Tooth extract at time of bone grafting, Orthodontic preparation for alveolar bone grafting in BCLP cases, How to evaluate graft success, on Expansion before or after grafting. How soon to initiate orthodontic treatment, Nasal symmetry with bone graft.

- How to evaluate a CT Scan and a CBCT to evaluate a cleft defect.
- MDT Clinics
- Surgical Demonstration of Bone grafting procedures on patient
- Demonstration of placement of NITI Expander

Orthopedic Treatment in cleft cases

- Treatment protocol for unilateral cleft lip and palate patients
- Facemask therapy for cleft deformity
- Clinical tips in orthodontics for cleft (bonding to finishing)
- Orthodontic treatment for a patient with a unilateral cleft lip and palate and congenitally missing maxillary lateral incisors and left second premolar
- Expansion modalities – Slow versus rapid and application in cleft.
- MDT clinics
- Retention and relapse with respect to Cleft patient s
- Surgical demonstration of Bone grafting procedures

Orthognathic surgeries

- Pre surgical and post surgical orthodontics in cleft patients
- Conventional Orthognathic VS Distraction Osteogenesis
- Overview of Orthognathic and segmental distraction
- Surgical demonstration of BSSO and placement of Distractors
- MDT Clinics

Prosthetic rehabilitation

- MDT Clinics

Speech in Cleft Patients

- Submission of log book and library dissertation
- MDT Clinics.

Fellowship Programme in Cleft Orthodontics

Goals:

To establish a comprehensive training program for Orthodontists in the management of Surgical and Cleft Lip and Palate Orthodontics.

Objectives:

Knowledge:

The trainee should acquire detailed knowledge pertaining to the cases of Cleft Lip and Palate, preventive 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 and 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 specialities like Orthodontics, Paediatric dentistry, Speech therapy, ENT etc.

Training in Orthodontics :

Will include diagnosis, treatment planning, arriving at surgical treatment objectives, pre-surgical orthodontics (including expansion, extraction, decompensation), fabrication of surgical splints, and post – surgical orthodontics.

Skills and Attitudes:

The trainee should, at the end of one year, be able to provide seamless care in all ortho aspects of cleft lip and palate from birth till adulthood.

This will include

- Fabrication of Obturators
- Fabrication of feeding plates.
- Naso Alveolar moulding.
- Fabrication of functional appliance.
- Demonstration of Over dentures.
- Fabrication of expansion devices and fixed mechanotherapy requires for cleft orthodontics.

- Fabrication of Speech devices (Palatal lift)

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

Skill Sets required Surgical Orthodontics :

Will include

- Diagnosis
- Computerised cephalometrics
- Surgical Treatment objectives
- Carrying out mock surgeries
- Reverse Orthodontics
- Decompensation
- Fabrication and use of various expansion and extra oral appliances
- Fabrication of distraction device
- Communicating with the oral surgeon the intended treatment plan.
- Fabrication of Surgical splints
- Post surgical orthodontics.

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.

Procedural and Operative Skills :

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

The recognised cleft center must be performing not less than 200 surgical procedures in the area of cleft lip and palate and orthognathic 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 treatment on atleast 50 cases under the supervision of a senior specialist.

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 palate repair	A	5
E.raction Osteogeneses	A	3
Cleft rhinoplasty	A	5
Fibreoptic nasendoscopy	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.

MDS in Orthodontics in DCI approved programme.

Requirements for accreditation of an Institution:

The department of Orthodontics should have been in existence in the institution as an independent unit or as a part of the dental college.

The Staff:

The Director of the programme should be an actively practicing and dedicated Orthodontist.

- Should have Post-graduate degree in Orthodontics with at least 8 years of continuous exclusive experience after Post Graduation.

- Should be a Post Graduate Teacher for an MDS program in Orthodontics.
- Should have taken part and presented papers in National and International conferences.

Teaching / Learning activities :

The training programme will include the following didactic activities :

1. Lectures / discussions by faculty in Orthodontics, Maxillofacial Surgery, Speech therapy, ENT, Prosthodontics, etc.
2. Multi Disciplinary Treatment (MDT) Clinic should be conducted before start of every cases.
3. Every fellow would have to develop and complete at least one research project, preferably leading to either a presentation or a publication in a peer reviewed journal.
4. Trainees will be encouraged to participate in teaching activities related to MDS (Orthodontics). Fellowship trainees will have to initiate and complete an independent research project under supervision.

Participation in Departmental activities:

- a) Journal review meetings: One session every two weeks.
- b) Seminars : One session every two weeks.
- c) Case discussion : One seminar every month.
- d) Inter departmental meetings : One multi-disciplinary cleft team meeting a week to discuss management protocols for specific cases (core specialists required are maxillofacial Surgeon, Orthodontist, Plastic Surgeons and Speech therapists). Other specialists who form second tier are Paedodontics, ENT, General Dentist, Social worker, Psychologist, Paediatrician, 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 programme:

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

Monitoring of Teaching / Learning activities :

- a) Methods :
 1. Direct consultant to trainee interaction.
 2. Maintenance of log book.
 3. Library Dissertation
 4. Formal quarterly review of a) Performance.
- b) Frequency c) Schedules or checklists, log books diary.

University Examination :

There shall be one theory 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 and palate Management and surgical orthodontics.
- b) Clinical examination : 2 case presentations with discussion on diagnosis, 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 externals.

Appointed by the University.

Recommended Books and Journals :

1. Multidisciplinary management of cleft lip and palate by Bardach and Morris.
2. Atlas of cleft and craniofacial surgery by Salyer and Bradach.
3. Plastic Surgery by McCarthy.
4. Cleft lip and palate by Berkowitz.
5. Cleft Palate & Craniofacial Journal.
6. Plastic reconstructive surgery Journal.
7. Journal of Craniomaxillofacial Surgery.
8. Journal of clinical orthodontics
9. American Journal of orthodontics and Dentofacial Orthopaedics.