SYLLABUS
University of Mumbai: M.Ch. Plastic Surgery Course

Basic Science

1. Embryology and development of human tissues
2. Genetics and congenital abnormalities
3. Mechanism of healing of tissues, factors affecting the healing
4. Infection and its management
5. General principles of Surgery
6. The suture materials and suture techniques
7. Clinical examination of various systems and clinical photography
8. General anesthesia pre and post operative care for general anesthesia
9. Local, regional and other nerve blocks
10. Hypotensive and hypothermic anesthesia
11. Management of benign and malignant lesions
12. Wound healing, wound care, dressings and splints
13. Fluid and electrolyte balance, acid base balance
14. Shock and pulmonary failure, blood transfusions, ventilatory support and critical care
15. Assessment of trauma, vascular emergencies embolism

General Topics

1. History of Plastic Surgery
2. Scope of Plastic Surgery
3. Tissue distortion, tissue loss and its management
4. Tissue culture, Transplantation biology and its applications
5. Plastic Surgery instruments and equipments
6. Maintenance of medical records, informed consent
7. Applications of computer and related programs
8. Social psychological, ethical and medico legal aspects communication skills
9. Implants, orthotics and prosthesis and applied to Plastic Surgery
10. Tissue expansion and tissue distraction
11. Management of Leprosy, leprosy deformities and leprosy reconstructive surgery
12. Endoscopic Plastic Surgery
13. Advances, recent advances and current trends in Plastic Surgery
14. Principles of surgical audit, understanding journal and review articles, text books and reference books, critical assessment of articles
15. Research methodology and biostatistics
16. Arteriovenous malformations, varicose veins, chronic venous insufficiency
17. Meningomyelocoele, encephalocoele, spinal fusion defects, ventral defects, anorectal anomalies

Principal aspects of Plastic Surgery

Skin

1. Anatomy and functions of skin
2. Diseases and other conditions affecting skin
3. Skin grafts, its take and behavior
4. Scars, unstable scars and scar contracture
5. Hypertrophic scars and Keloids
6. Flaps, anatomy and physiology, classification and applications
7. Pedicled skin flaps and tube pedicle

Head and Neck

1. Embryology, anatomy, growth and development of face and facial skeleton
2. Structure and development of teeth
3. Temporomandibular joint and its dysfunction
4. Fractures of facial skeleton, management, sequel and subsequent surgery
5. Reconstruction of ear, eyelid, lip, nose, cheek and soft tissues of face
6. Congenital deformities of face and syndromes
7. Cleft lip and palate, embryogenesis, management, orthodontics, velopharyngeal incompetence and speech therapy
8. Craniofacial abnormalities, clefts, syndromes, microsomia, synostosis and hypertelorism Ptosis of eyelids
9. Facial Paralysis
10. Orthognathic surgery
11. Surgery of neck associated with congenital and acquired deformities
12. Rhinoplasty – corrective, aesthetic and reconstructive
13. Benign and malignant lesions and tumors of head and neck, tumor biology, management including chemotherapy, adjuvant therapy and radiotherapy
14. Reconstruction of mandible, maxilla and other bony defects
15. Prosthetic rehabilitation
16. Reconstruction of upper aerodigestive system

Trunk

1. Congenital and acquired defects of thorax and abdomen and its reconstruction
2. Decubitus ulcers and its management
3. Breast, anatomy, physiology, growth, development hormone influence, abnormalities, diseases, surgery and reconstruction, Gynecomastia
4. Reconstruction of full thickness defects of thorax and abdomen

Lower extremity

1. Anatomy and biomechanics of locomotor system
2. Functional anatomy of foot
3. Congenital and acquired deformities of lower extremity
4. Management of tissue defects following trauma
5. Lymphoedema

Genitourinary

1. Embryology and anatomy of the male and female genitourinary system and genitalia, undescended testis
2. Hypospadias, epispadias and ectopia vesicae, urinary diversion
3. Reconstruction of external genitalia
4. Vaginoplasty
5. Intersex
6. Infertility, vasectomy, tuboplasty, reconstruction

Hand

1. Embryology and anatomy of hand and upper extremity
2. Clinical examination of hand and general principles of hand surgery
3. Acute hand injuries
4. Tendon injuries
5. Nerve injuries
6. Brachial plexus injuries
7. Fractures and dislocations of hand
8. Injuries and disorders of nail
9. Electro diagnostic tests
10. Ischemic conditions and vasospastic disorders
11. Nerve compression syndromes
12. Surgery of spastic and tetraplegic hand
13. Infections and diseases of hand and its management
14. Congenital abnormalities of hand and its management
15. Tendon transfers
16. Lymphoedema
17. Benign and malignant tumors of hand
18. Rehabilitation of hand, physiotherapy, occupation therapy, splintage and prosthesis
19. Rheumatoid arthritis
20. Vascular malformations, tumors
21. Reconstruction of thumb
22. Reconstruction of mutilated hand
23. Innervated flaps

Micro-surgery

1. Principles of micro-surgery, micro vascular surgery and its applications
2. Replantations and revascularization surgery
3. Microvascular tissue transfer

Burns

1. Thermal, Electrical, Chemical, Radiation, Burns
2. Burns shock, Pathophysiology, treatment, wound care, nutrition, sequel
3. Post burn contractures, deformities and its management
4. Tangential excision, skin cover, allograft, homograft, xenograft and its application in burns
5. Planning for burns care in disaster
6. Organization of Burns care unit
7. Rehabilitation following burns, psychological and social impact

Aesthetic Surgery

1. Chemical peeling, dermabrasion, laser treatment
2. Blepharoplasty
3. Surgery of ageing face
4. Body contouring, liposuction, abdominoplasty, hernioplasty
5. Reduction and augmentation mammoplasty
6. Hair transplant
7. Orthognathic aesthetic surgery

M.CH. TRAINING IN PLASTIC SURGERY
Recommendations of the Association of Plastic Surgeons of India October 1999
Pre Requisites of a Training Centre In Plastic Surgery

1. Minimum beds 25 - 30
   A) Burn beds extra
   B) Separate facility for women and infants
2. Staff
   A) Professor 1
   B) Associate Professor/Reader 1
   C) Assistant Professor/Lecturer 1
   D) Service Doctors will be extra whether trainees or others

   Qualifications & experience as per MCI rules
3. Independent Operation theatre with requisite staff
4. Should take emergencies directly for primary care of cases pertaining to:
   A) Hand trauma
   B) Faciomaxillary trauma
   C) Soft tissue trauma
   D) Acute burns
5. Supporting facilities:
   A) Physiotherapy & Occupational therapy
   B) Orthostatic section for splint fabrication
   C) Photography
   D) Library-with all relevant books & periodicals
   E) Experimental surgery laboratory for research and for practicing microvascular surgical techniques is desirables and recommended.
   F) Facilities for cadaveric dissection

PERIODIC INSPECTION OF CENTRE AFTER 5 YEARS TO MONITOR WHETHER FACILITIES CONTINUE TO EXIST OR NOT.

Curriculum for M.Ch. Plastic Surgery

1. Selection criteria

   A) Eligibility D.N.B./M.S. (General Surgery)

   B) Entrance test

   I Written MCQ, short answer questions

   (***As per Direction No. 01/2008 dtd. 26/05/2008)***

   C) Syllabus Basic principles of general surgery as Applied to plastic surgery

   Fundamentals of plastic surgery

Selection on merit

2. Duration of training 3 years

3. Objectives of training

A. At the end of comprehensive training candidate should have acquired knowledge and understanding of:

   i) General plastic surgery

   ii) Hand surgery including trauma

   iii) Facio-maxillary surgery

   iv) Soft tissue trauma

   v) Burn injuries & their sequel

   vi) Aesthetic surgery

   vii) Micro vascular surgery

B. Should have acquired competence & skills to be able to:

i) Manage & operate independently all emergencies pertaining to above disciplines.

ii) Manage & operate independently common plastic surgery problems.

iii) Apply basic techniques & proceed methodically to manage complicated problems in plastic surgery.

C. Should have acquired training in basic techniques of microvascular surgery

4. Training methodology

A) For acquiring knowledge, understanding & its application

Weekly:

a) Seminars

b) Journal review

c) Treatment planning session

d) Group discussion

e) Tutorials

f) Grand rounds

B) For acquiring competence in clinical & surgical skills.

Candidate should work as full time residents & should have

i) Duties in wards, outpatient operation theatre

ii) Should be on emergency duties in turns.

iii) Should be involved in pre & post operative management of case and in treatment planning.

iv) Should be given gradually increasing responsibility in operative management

a) 1st as observer

b) Next as assistant

c) Operating under guidance

d) Operating independently

v) A minimum number of procedures a trainee should have done/operated should be laid down & of these records are kept by trainee

C) For attaining competence in research methodology & experience in teaching

i) Dissertation to be submitted before end off 2nd year

ii) Trainer facilities preparations by candidates of papers and presentation at conference.

iii) Trainee is encouraged to attend & participate in workshops/conferences & CME programs

5. Evaluation/Assessment

A) Internal assessment

a) Continuous assessment during the course of training for assessment of

i) Gain in knowledge

ii) Acquisition of operative competence in management of plastic surgery problems including emergencies.

b) Assessment to be carried out by all teachers involved in training.

c) Candidates maintains a log book recording all procedures they have done & assisted

d) Results of assessment to be communicated to trainees for feedback of students

e) Final assessment for award of M.Ch. degree

Examination at end of 2 ½ years-

Those who pass becomes chief residents for next 6 months

Those who fail get a chance to improve their deficiencies while still working and appear again at 3 years.

B) Examiners External - 2

Internal - 1 or 2

Submitted on behalf of APSI by:

Dr. Rajeev B. Ahuja

Hony. Secretary

Association of Plastic Surgeons of India

M.Ch. PLASTIC SURGERY

RULES OF DISSERTATION: MUMBAI UNIVERSITY

(No. 596 of 1984)

1. Topic of dissertation should be assigned to a candidate by teacher within one year after registration for MD and MS and within 6 months for DM and M.Ch. Those who take MD/MS after passing diplomas in the subject should be assigned immediately

2. Candidate should submit title of dissertation and place of work to the university within the above stipulated time

3. Candidate should submit the dissertation to the university 6 months before he is due to appear for exams.

RULES FOR DISSERTATION – Reforms suggested

1. SELECTION OF TOPIC

    a. Topic (structured synopsis of intended research) selected to be communicated to a board which approves it

    b. If required ethics committee approval???

    c. No repetition topics in the same academic year

    d. The thesis shall present and account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

Every candidate registered for a post graduate degree program shall carry out research on assigned project under the guidance of a recognized teacher. The result of this research work should be recorded, analyzed, written up and submitted in the form of a thesis. The applicants should prepare the thesis as per guidelines laid down by university.

The research topic should have 30% component of basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient number of variables to give training to the candidate to conduct research, to acquire and analyse data.

The thesis work is given with an aim to develop a sprit of enquiry besides exposing the candidate to techniques of research, analysis and acquaintance with recent advances and learning to review literature in a given topic. The thesis should be submitted one year before the final examination.

2. COMMUNICATION

    a. By 3 months it should be communicated to the university and by 6 months sanction to be obtained

3. DURATION OF STUDY

    a. 1 ½ years

    b. The progress of a candidate should be reviewed annually by a Committee (which includes the teacher/supervisor) following a report by the candidate.

4. LAST DATE OF SUBMISSION
   6 months before exams