Curriculum

FNB Fellowship

Pain Medicine

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I. GOAL AND OBJECTIVES OF THE PROGRAMME

1. Background

As the field of medicine learns more about the complexities of pain, it has become more important to have physicians with specialized knowledge and skills to treat different pain conditions. Pain covers a wide spectrum of disorders including chronic pain, cancer pain and sometimes a combination of these. An in-depth knowledge of the physiology of pain, the ability to evaluate patients with complicated pain problems, understanding of specialized tests for diagnosing painful conditions, appropriate prescribing of medications to varying pain problems, and skills to perform procedures (such as nerve blocks, spinal injections and other interventional techniques) are all part of what a pain management specialist uses to treat pain. In addition, the broad variety of treatments available to treat pain is growing rapidly and with increasing complexity. With an increasing number of new drugs, techniques and technologies becoming available every year for the treatment of pain, the pain management physician is uniquely trained to use this new knowledge safely and effectively to help chronic pain patients. Finally, the pain management specialist plays an important role in coordinating additional care such as physical therapy, psychological therapy and rehabilitation programs in order to offer patients a comprehensive treatment plan with a multidisciplinary approach to the treatment of their pain.

A Pain Medicine Specialist is a physician with special training in evaluation, diagnosis, and treatment of all different types of pain. Pain Medicine Specialists use a broad-based approach to treat all pain disorders, ranging from pain as a symptom of disease to pain as the primary disease. The pain physician serves as a consultant to other physicians and is the principal treating physician and may provide care at various levels, such as treating the patient directly, prescribing medication, prescribing rehabilitative services, performing pain relieving procedures, counselling patients and families, directing a multidisciplinary team, coordinating care with other health care providers and providing consultative services to public and private.

2. Programme Goal

a) To produce competent Pain Medicine Specialists and to cater the need of the community.
b) To be aware of contemporary advances and development in the discipline concerned.
c) To practice at secondary and tertiary level of health care delivery system.

d) To provide the expertise with special skills in managing chronic pain patients.
e) To provide structured training programme including academic activities in the form of the catered training, lectures, case discussions, journal review and clinical audit meeting and to improve the knowledge and skill in the specialty.

The goals of educating the Pain Medicine Specialist are:

a) Mastery of the knowledge, technical & other skills required to practice pain medicine
b) A working knowledge of the principles and concepts that underlie the practice and
c) To acquire judgment, expertise and the ability to be a consultant to those who seek advice outside and inside the discipline of anaesthesiology. The student must also learn how to solve unforeseen problems and to answer important questions, in addition to mastering the technical skills and acquiring the available knowledge.

3. Program Objectives

To produce Pain medicine specialists who are specially trained, qualified and revalidated so as to offer integrated, co-ordinated, holistic assessment and management of chronic pain using unique knowledge and skills to deliver comprehensive, chronic pain patient centred care.

To have Pain Medicine Specialists across country for patient interest in particular and society in general.

The objectives of the course is to impart thorough and comprehensive training to the candidate in the various aspects of this specialty to enable him/her:

a) To function as a member of faculty/consultant in the specialty
b) To carry out and to help in conducting applied research in the field of pain medicine
c) To plan and to set-up independent Pain Clinic / Pain Management Centre catering to Chronic Pain Patients.

II. TEACHING AND TRAINING ACTIVITIES

The fundamental components of the teaching programme should include:

1. Case presentations & discussion- once a week
2. Seminar – Once a week
3. Journal club- Once a week
4. Round Presentation
5. Faculty lecture teaching- Twice a month
6. Clinical Audit-Once a Month
7. Present Two Posters/ Papers during two years FNB Pain Medicine period at conference / symposium (May be Case Series or Case Report)

The rounds should include bedside sessions, file rounds & documentation of case history and examination, progress notes, round discussions, investigations and management plan) interesting and difficult case unit discussions.

The training program would focus on knowledge, skills and attitudes (behavior), all essential components of education. It is being divided into theoretical, clinical and practical in all aspects of the delivery of the rehabilitative care, including methodology of research and teaching.

a) **Theoretical**: The theoretical knowledge would be imparted to the candidates through discussions, journal clubs, symposia and seminars. The students are exposed to recent advances through discussions in journal clubs. These are considered necessary in view of an inadequate exposure to the subject in the undergraduate curriculum.

b) **Symposia**: Trainees would be required to present a minimum of 10 topics based on the curriculum in a period of two years to the combined class of teachers and students. A free discussion would be encouraged in these symposia. The topics of the symposia would be given to the trainees with the dates for presentation.

c) **Clinical**: The trainee would be attached to a faculty member to be able to pick up methods of history taking, examination, prescription writing and management in rehabilitation practice.

d) **Bedside**: The trainee would work up cases; learn management of cases by discussion with faculty of the department.

e) **Journal Clubs**: This would be a weekly academic exercise. A list of suggested Journals is given towards the end of this document. The candidate would summarize and discuss the scientific article critically. A faculty member will suggest the article and moderate the discussion, with participation by other faculty members and resident doctors. The contributions made by the article in furtherance of the scientific knowledge and limitations, if any, will be highlighted.

f) **Research**: The fellow shall be required to publish at least 2 scientific papers in peer reviewed journals or present them.

III. SYLLABUS

1. Epidemiology:

Incidence, prevalence, magnitude of problem of chronic and cancer pain

2. Basic Sciences:

- Anatomy and Physiology
- Peripheral Mechanism
- Central Mechanism
- Pain Modulation
- Pain Measurement

- Pharmacology of pain transmission and modulation
- Peripheral Mechanism
- Synaptic transmission in dorsal horn
- Central sensitization
- Neurotransmitters in pain modulation

- Psychosocial aspect of pain
- Definition and measurement of pain, Pain Scoring
- Individual differences
- Behavioural processes
- Emotional problem and psychiatric disorders associated with pain

3. General principles of pain evaluation

- Diagnosis; Clinical History, Patient Examination
- Investigation: Interpretation/ Relevance in reference to various Pain Syndromes

- Pharmacological management
- Interventional Pain Management

IV. COMPETENCIES

1. Goals

a) Understand Pain Physiology.
b) Perform a thorough assessment: History and Clinical Examination of the chronic pain patients; pain scoring, mapping and charting.
c) Evaluate and /or conduct relevant investigations
d) Choose appropriate treatment modality for patients with different types of pain syndromes and the skills for lifelong continuing education.
e) Administer interventional pain management blocks for a wide variety of chronic pain patients and develop interest in further Learning.
f) Have sound knowledge of imaging anatomy (Fluoroscope, USG, MRI, CT, X-ray and the like)
g) Have knowledge of side effects / adverse events/ complications of treatment modalities and competency to manage them.
h) Have knowledge of health hazards associated with the use of fluoroscopy and other equipments and take appropriate steps to prevent / minimize them.
i) Develop clinical, technical, teaching, training and research skills necessary for pain medicine.
j) Data Collection, Analysis and Interpretation.
k) Follow Ethical and Medicolegally safe practice of Pain Medicine.

2. Objectives

The FNB Pain Medicine fellow should acquire following competencies:

a) To Diagnose Various Chronic Pain Syndromes including

- Trigeminal Neuralgia, Occipital Neuralgia, Orofacial pain, Atypical Facial Pain etc.
- Neuropathic Pain (CRPS, Post Herpetic Neuralgia and the like)
- Neck Pain
- Shoulder Pain
- Back Pain: PIVD (prolapsed intervertebral disc / herniation, Zygo-apophyseal joint pain, SI Joint Pain, Coccydynia, Vertebral Collapse, Discitis, TB of spine,

- Hip Pain, Knee pain
- Complex Regional Pain Syndromes
- Myofascial Pain Syndrome & Fibromyalgia
- Osteoarthritis & Rheumatoid arthritis
- Headache, Migraine and the like
- Urogenital Pain Syndrome, Chronic Perineal Pain, Pelvic Pain
- Cancer Pain Syndromes
- Spasticity
- Pain in elderly, children, women, vulnerable population
- Metastasis pain, breakthrough pain, palliative care

b) To learn following modalities of treatment used for Management of Chronic Pain:

i. Pharmacological Therapy

- Pharmacological management of chronic pain syndromes with knowledge of the use, side effects, dependence and addiction of medications including analgesics, anti-inflammatory drugs, anti epileptic drugs, neuromodulators, muscle relaxants, narcotics, antidepressants, Disease-Modifying Antirheumatic Drugs, Biologicals, Bisphosphonates, Calcitonin, Parathyroid hormone, Neurotropic agents, Vitamin B12, E, D ; Folic Acid, Botulinum Toxin, Hylaluronate, local anaesthetics, corticosteroids, and the like.

ii. Interventional Pain Management:

- Imaging Anatomy
- Side Effects and complications of interventional pain management procedures, their prevention and management

iii. Genetic Therapy, Stem cell Therapy

iv. Physical Medicine and Rehabilitation

v. Psychiatric treatment and psychological counselling

c) To attain skill, competency in practice of following Interventional Pain Management Procedures:

i. Essential (Fluoroscopeand /or USG Guided)

- Epidural Injections: Interlaminar, Parasaggital, Caudal
- Transforaminal Injection
- Inta articular Injections: Facet joint Injection
- Medial Branch Block

- Genicular and Saphenous Nerve Blocks
- Stellate ganglion Injection
- Celiac Plexus Block
- Splanchnic Nerve Block
- Lumbar Sympathetic Block
- Sacroiliac Joint Injection
- Ganglia Impar Block
- Neuroablative Procedures including RF Lesioning
- Gasserian Ganglion Block
- V1, V2, V3 Nerve Blocks
- Sphenopalatine Ganglion Block
- Glossopharyngeal Nerve Block
- Superior Hypogastric Plexus Block
- Intra- Articular Knee Joint, Shoulder Joint, Elbow & Hip Joint Injection
- Neuroablative procedures (Alcohol / Phenol)

ii. Essential (Surface Landmark Guided)

- Stem Cell / Platelet Rich Plasma (PRP) Therapy
- Occipital Nerve Block
- Infraorbital, Supra orbital, Mental, Inferior Alveolar Nerve Blocks
- TM Joint Injection
- Suprascapular Nerve Block
- Trigger Point Injections
- Carpal Tunnel Block
- Intercostal Nerve Block
- Intra- Articular Knee Joint, Shoulder Joint and Elbow Joint Injection
- TENS

d) Desirable

i. Percutaneous Disc Procedures including Disc Fix, Endoscopic lumbar Disectomy
ii. Vertebroplasty, Khypoplasty, Discography
iii. Balloon Compression for Trigeminal Neuralgia
iv. Intrathecal/ Epidural pumps, Spinal Stimulation

e) Research Work: The fellow shall be required to publish at least 2 scientific papers in peer reviewed journals or present them.

V. LOG BOOK

A candidate shall maintain a log book of procedures (assisted / performed) during the training period, certified by the concerned post graduate teacher / Head of the department / senior consultant.

This log book shall be made available to the board of examiners for their perusal at the time of the final examination.

The log book should show evidence that the before mentioned subjects were covered (with dates and the name of teacher(s) The candidate will maintain the record of all academic activities undertaken by him/her in log book.

1. Personal profile of the candidate
2. Educational qualification/Professional data
3. Record of case histories
4. Procedures learnt
5. Record of case Demonstration/Presentations
6. Every candidate, at the time of practical examination, will be required to produce performance record (log book) containing details of the work done by him/her during the entire period of training as per requirements of the log book. It should be duly certified by the supervisor as work done by the candidate and countersigned by the administrative Head of the Institution.
7. In the absence of production of log book, the result will not be declared.

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