

## Pain medicine as a career

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## ABSTRACT

Pain is one of the most common causes of seeking medical care. In the day to day clinical practice, incidence of pain of some origin is next only to common cold. The average life span of an Indian has also increased and this population is vulnerable to chronic and cancer pain. Anaesthesiologists are well-versed with the art and science of treating pain and their role as pain physician is a natural extension of the professional work. 'Pain Medicine' is growing as a speciality. Last two decades have seen an explosive growth in the scientific study of pain and anaesthesiologists taking up pain medicine as a career. Postgraduate students can certainly adopt this super speciality. This article highlights the merits and depicts various aspects of 'pain medicine' as a career.

**Key words:** Education, pain, pain management, palliative care, physicians, research, student, telemedicine

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## INTRODUCTION

Pain is an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.<sup>[1]</sup> In chronic primary pain syndromes, pain can be the sole or a leading complaint (fibromyalgia or nonspecific low-back pain). In chronic secondary pain syndromes, pain is secondary to an underlying disease: chronic neuropathic pain, musculoskeletal pain, visceral pain, chronic posttraumatic and postsurgical pain, secondary headache and orofacial pain, and cancer-related pain.<sup>[2]</sup> A 'pain physician' is a specialist who assesses and evaluates pain, classifies and grades it, and then treats it effectively. The pain physician has a detailed knowledge of the pathophysiology of pain, the pharmacology of pain medications and is skilled in interventional procedures to relieve pain. He treats pain with drugs, different types of nerve blocks, spinal/epidural drug injections, radiofrequency ablation, viscosupplementation, implantation of intrathecal pumps and spinal cord stimulators, and stem cell treatment.

To set up pain practice, one requires a clinic in the outpatient department (OPD) for patient consultation

and out-patient procedures, an attachment to a radiological and biochemical diagnostic laboratory or centre and to an operation theatre (OT) for performing interventional pain management procedures. The OT should be equipped with fluoroscopy, ultrasonography and resuscitation equipment. Pain treatment facilities can be delivered by a multidisciplinary pain centre, single disciplinary centre or modality oriented clinics. Multidisciplinary pain centres can be of two types, one with facilities for research and training, and others that offer only diagnosis and treatment. A multidisciplinary pain treatment team is comprised of pain physicians, nurses, psychologist, physical therapist, occupational therapist, counsellor and biofeedback therapist. If a pain physician has to start his/her own set up, there are different options. One can set up an office-based

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OPD service, and for interventions can use the OT and other services in a nearby hospital on sharing basis. Second option is to become a part of a hospital where OPD, OT and indoor services can be used. Third option is to make a set-up where all these facilities can be provided under a single roof. In hospital-based practice, the pain physician can be a part of the department in a corporate hospital or medical colleges. Presently, there are very few corporate hospitals that employ pain physicians and that too at a fixed salary. Most of the pain physicians are providing services as visiting consultants. Those who are well-versed with cancer-related pain-relieving procedures and palliative care, can join dedicated cancer institutes/hospitals.

### **MERITS OF TAKING UP PAIN MEDICINE AS A CAREER**

The main grudge of most anaesthesiologists is that they are always 'behind the scene' and do not get recognition by the patients and society. This problem does not exist for an anaesthesiologist who practises pain medicine because he/she is in direct contact with the patient. As pain medicine covers patients suffering from chronic and cancer pain, a pain physician can cater to a large proportion of population. An anaesthesiologist who chooses pain medicine as a career has an opportunity to perform interventional pain procedures. The pain physicians are trained and have enough skill and knowledge to carry out such procedures. The pain relief given to the suffering patient is very rewarding and satisfying. Patients in pain are in need of a sympathetic clinician who will support their perseverance, hope and trust, and pain physicians by doing so, gain the patients' gratitude and blessings. Moreover, pain medicine practice is financially rewarding after initial few years of practice. The family members of the pain physicians are also happy because the pain physician does not have to do duties at odd hours. He/she can adjust the consultation and interventional procedure timings and thus spend quality time with the family.

### **DEMERITS OF 'PAIN MEDICINE' AS A CAREER**

Patients are usually referred to the pain physician by orthopaedicians, neurologists, neurosurgeons, oncologists and general practitioners; however, this referral is poor because these practitioners tend to treat the patients themselves. Chronic pain management is sometimes not gratifying when there is less/no relief of the symptoms.

### **CURRENT POPULARITY, GROWTH AND RECOGNITION OF 'PAIN MEDICINE' AS A SUPERSPECIALITY IN INDIA AND OTHER COUNTRIES<sup>[3]</sup>**

It is well established that pain can be best relieved by well-trained and dedicated pain physicians compared to other specialists. There is a growing popularity of well and specially trained pain physicians not only in our country but also worldwide. A progressive increase in demand of well-trained and dedicated pain physicians has been observed in almost all well recognised multispeciality hospitals and government institutes. In day-to-day clinical practice, the incidence of pain of some origin is quite high. The average life span of an Indian has increased and the geriatric population is vulnerable to chronic and cancer pain. This is the reason why the pain speciality is growing by leaps and bounds with each passing decade and is being now recognised at the national level by the government, medical fraternity and community at large. The last two decades have seen not only the younger generation but also the senior professionals from the field of anaesthesiology increasingly assuming the role of pain physicians.

### **TEACHING AND TRAINING<sup>[4]</sup>**

Teaching and understanding of pain medicine should begin at the undergraduate level with a basic education and knowledge of pain management. The same can be made much more inclusive of education and knowledge of pain medicine during the postgraduate courses in anaesthesiology. In India, Post Doctoral Certificate Course (PDCC) and DM courses are functioning in various teaching institutes to provide training in pain medicine. One year fellowship and certificate courses in pain medicine have been launched in the Banaras Hindu University, Varanasi and Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow since 2008 and 2010, respectively. Maharashtra University of Health Sciences (MUHS), Nashik and D.Y Patil Medical College, Nerul, Navi Mumbai have also started one year pain medicine fellowship courses since 2016 and 2019, respectively. D.M. in Pain Medicine has also been started in AIIMS, Dehradun since last year. World Federation of Societies of Anaesthesiologists (WFSA), Australian and New Zealand College of Anaesthetists (ANZCA), International Association for the Study of Pain (IASP) and Indian Society for Study of Pain (ISSP) courses are also being conducted in some centres in India.

Many pain physicians have passed World Institute of Pain (WIP) certification like Fellowship in Interventional Pain Practice (FIPP) and Certified Interventional Pain Sonologist (CIPS). Out of these, many of the courses are notified by National Medical Commission [(NMC), earlier Medical Council of India (MCI)] but not recognised presently.

The revised MD Anaesthesiology curriculum by NMC (Competency Based PG Training Programme for MD Anaesthesiology released in September 2019 by earlier MCI) also provides important training and understanding in chronic pain management. The curriculum has been designed but the onus is on head of departments of anaesthesiology and in-charges of pain clinics/pain management centres that the postgraduates are imparted proper teaching and training in chronic pain management.

The curriculum states that the MD anaesthesiology postgraduate must possess and demonstrate abilities to manage chronic pain and practice different modalities of chronic pain management, including pharmacotherapy, non-opioid analgesia, interventional neuro-blockade, spinal opioids, neuroablation, neuro-augmentation, physical therapy, psychotherapy, etc. They should be taught assessment of patients with pain, including history taking, physical examination and interpretation of investigations. They should be able to classify the types of pain – acute and chronic pain and further chronic pain as nociceptive, neuropathic or mixed pain. The postgraduates should have knowledge of pain pathways; theories of pain; principles of management of nociceptive pain– myofascial pain, low back pain, intractable angina, burns, chronic pancreatitis, peripheral vascular disease; principles of management of neuropathic pain-phantom limb pain, post-herpetic neuralgia, complex regional pain syndrome, trigeminal neuralgia, cancer pain and should be aware of the basic principles of palliative care.

The postgraduates should be posted for one month in pain clinic between 6 and 24 months of their postgraduation. They should practise epidural steroid injection (all levels) and long-term epidural catheterisation. They should know the indications for stimulation techniques such as transcutaneous electrical nerve stimulation (TENS), dorsal column stimulation, deep brain stimulation and mechanisms and side effects of other therapies used for treating pain. They should be aware of the principles for insertion and management of implantable drug delivery pumps. The postgraduates

should understand the principles of pain management in special patient groups, including elderly, children, disabled, intellectually handicapped and those unable to communicate. They should demonstrate practice of pain management in patients with problems of drug abuse, drug dependency and drug addiction.

An important and long sought dream of a dedicated and structured course in pain medicine has been fulfilled in 2020. Due to persistent efforts of ISA National Secretariat along with a dedicated team of pain physicians and senior anaesthesiologists, National Board of Examinations (NBE), New Delhi has approved and notified Fellowship National Board (FNB) in Pain Medicine. It is a dedicated two year course in pain medicine in NBE accredited centres with national entrance examination. The curriculum has been properly designed keeping in mind the Indian health care set-up. As far as qualification or training of pain medicine is concerned, anaesthesiology postgraduate certification like DA, MD or DNB should be made as compulsory and minimum requirements.

## GLOBAL ASPECTS<sup>[5]</sup>

Worldwide, there are different certification programmes in pain medicine in different countries. In the United States of America (USA), there is a board certification programme by the American Board of Pain Medicine and the American Board of Interventional Pain Physicians that consists of a one-year training fellowship after passing in a broad speciality. In the United Kingdom (UK), pain medicine is recognised as a subspeciality. Australia and New Zealand have detailed guidelines for pain courses as per FPM-ANZCA National Pain Strategy 2010. In many countries like the USA and UK, one can practise pain medicine only after obtaining the certification programme of the country. In most countries, a basic degree in anaesthesiology followed by some training is usually sufficient to do pain practice.

In the USA and UK, there are fixed protocols for practice in pain medicine. Separate coding system is available for different pain conditions, their diagnosis and treatment. In the USA, most of the interventions are covered by insurance companies, ranging from trigger point injections to spinal cord stimulators and intra-thecal pumps. In the UK, all treatment and interventions are taken care of by the National Health Services (NHS) regulations. In India too, the ISSP has released its coding system for all pain medicine

treatment which will be very useful for medical insurance purposes.

### **ECONOMICAL AND FINANCIAL ASPECTS<sup>[6]</sup>**

In comparison to anaesthesia speciality, pain medicine has its own advantages and differences. It has different financial dimensions in terms of investments, maintenance cost and return of investments. Financial liabilities of all the above options differ and the return of investment also varies accordingly. One has to purchase instruments and equipments required in practice for OPD and OT. This has its own depreciation in terms of value, maintenance and time. Based upon individual practice, one has to purchase equipments like image intensifier (C-Arm), ultrasound, radiofrequency ablation machine, endoscopes, etc. The cost of setting up the pain management clinic including land, infrastructure, staff, manpower, OT, OPD, etc., has to be kept in mind. One has to upgrade its services regularly, so that there is constant operational and maintenance cost.

Adequate OPD clinic consultations and pain interventions can provide a good amount of remuneration after completing the initial year in practice. One can develop a reputation in the area of pain expertise and compounding of consultation and interventions can be achieved. Stage-wise expansion of the pain management centre can be done. Presently in India, the finance in clinical practice is mainly cash-based individualised services. Medical Insurance coverage is available to a very low percentage of population, that too in urban areas. A lot of patients are beneficiaries of central government health scheme (CGHS). Currently, many government schemes like Ayushman Bharat and various state governments run medical insurance are being implemented in the different states of India. There are many pain relief procedures that are already covered in these schemes, while others have to be included in the near future. These patients form a good chunk of society and are a potential source of revenue generation.

### **LEGAL ASPECTS**

As the superspeciality of pain medicine comprises of both OPD services and interventions, one has to be aware about all the legal aspects, including consent related to outdoor consultations, cross referrals from other departments, interventions and procedure-related complications. All these have to

be clearly stated and recorded as per law. Nowadays, especially after coronavirus disease (COVID)-19, online consultation and telemedicine are being increasingly used. One has to be aware about the recent changes regarding teleconsultation guidelines by the Government of India. The practising pain physician should comply with all the necessary guidelines pertaining to OPD, procedure room/operation theatre and post-procedure room. All the possible options of treatment and anticipated consequences/possible complications should be discussed and documented with patients and family members. Procedure notes and discharge advices have to be clearly stated and also given in writing. The pain clinician should practise according to National and International Protocol and guidelines. It is always advisable that one should have a Professional Indemnity Insurance plan with good coverage amount, preferably one crore INR with a minimum of 50 lacs INR. The ISA endorsed professional indemnity insurance scheme is a good option at a very economical premium.

### **EFFECT OF COVID-19 PANDEMIC ON THE 'PAIN MEDICINE' SPECIALITY<sup>[7]</sup>**

Just like most other medical specialities, the field of pain medicine is one of the hardest hit from the COVID-19 pandemic leaving many patients overburdened with their chronic pain and their on-going treatment delayed.<sup>[8]</sup> The anaesthesiologists have been diverted to COVID-19-related activities. Patients are less able or willing to travel for care or may be fearful of exposure to infection in a public or medical setting. Furthermore, diagnostic imaging such as X-rays, computed tomography (CT) scans, magnetic resonance imaging (MRI) scans and interventional pain procedures have all had to be deferred.

There is growing evidence that COVID-19 is associated with myalgias, referred pain and widespread hyperalgesia. Chronic pain can be a part of a post-viral syndrome or the result of virus-associated organ damage. Chronic pain may be newly triggered in individuals not infected with COVID-19 by exacerbation of risk factors, like poor sleep, inactivity, fear, anxiety and depression.<sup>[9,10]</sup>

In the COVID -19 pandemic, the pain physicians have responded appreciably to the challenge. They have served the patients and mankind exceptionally well and relieved pain of millions of patients during the pandemic. It involves examining the patients while wearing specified

personal protective equipment by the pain physician and supportive staff; implementing and following social distancing and hand hygiene precautions; prescribing pharmacotherapy (both opioid and non-opioid analgesics) and performing interventional pain procedures as per institutional and national guidelines in consultation with the patients. The necessary diagnostic test for severe acute respiratory syndrome coronavirus (SARS-CoV-2) prior to intervention, modifications in use of steroid for interventional pain procedures and increased use of radiofrequency ablation are some of the changes made in clinical pain practice.<sup>[11]</sup> In many institutes, pain services were the first to be resumed. This highlights the importance of pain medicine for administrators and establishes pain medicine as a superspeciality.

Evidence that telemedicine can help to provide ongoing services to chronic pain patients is accumulating, especially in this current COVID-19 pandemic.<sup>[11]</sup> Telemedicine may be beneficial in maintaining contact with patients and continuing therapy, educating them about their condition and management options, and involving them in shared decision-making processes. Telemedicine in chronic pain is usually focused on non-pharmacological interventions and online prescription of medications. However, there are some limitations to telemedicine which include inability to perform a proper physical examination leading to delays in proper diagnosis and inability to perform interventions.

## RESEARCH IN PAIN MEDICINE

In the latest update of the International Classification of Diseases, chronic pain is properly recognised and coded.<sup>[2]</sup> Nonetheless, there is a need for strengthening pain research in basic science disciplines: physiological, cognitive and psychological so as to develop targeted pain therapies that are safer and more effective for an individual or a group of people. The use of telemedicine in pain management is another upcoming area of research.

A major issue faced by researchers in universities and medical colleges is the low research literacy and the distrust that exists between study population and pain researchers i.e., research is seen as a distraction from the needed pain care.<sup>[12]</sup> In addition, the pain experience itself and associated emotional stress can often increase participant burden particularly if study participation requires rigid adherence to a schedule

or has a high demand for time, with a negative effect on recruitment and retention. Low primary literacy in our country can contribute to low research literacy, however, does among literate individuals, knowledge of the research process is frequently low. The low research literacy is also a barrier for validity of pain measures across different subgroups of population.

The ethical obligation of pain researchers is to ensure that the research process is fair and does not place undue burden or even not unduly harm the vulnerable populations.<sup>[12]</sup> Another major challenge faced by pain researchers is to employ control group designs to investigate the effect of diagnostic or therapeutic interventions. Current international recommendations recommend that control group subjects should receive an established effective intervention. In addition, the use of placebo or no treatment is permissible only, when on doing so it will expose control subjects to temporary discomfort or only delay in relief of symptoms. The use of 'sham blocks' is again debatable.<sup>[13]</sup>

The involvement of agencies at various levels (national, state, institute) can improve data collection and reporting of pain. Several national and international pain societies are working towards developing evidence-based guidelines that are of high quality, practical and clinically applicable to our diverse patient population, although the gains have been slow.

## CONCLUSION

Pain Medicine is a fast growing superspeciality and taking up a career in 'Pain Medicine' can be satisfying and rewarding. The key to being a successful pain physician is to have passion to make the world pain-free and be compassionate towards patients as the great relief one can provide to mankind is pain-relief.

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