आयुर्विज्ञानसंस्थान (एम्स) कल्यानी
All India Institute of Medical Sciences (AIIMS) Kalyani
(स्वास्थ्यएवंपरिवारकल्याणमंत्रालय, भारतसरकारकेतत्वावधानमेंएकसांविधिकनिकाय)
(A Statutory Body under the Aegis of Ministry of Health and Family Welfare, GOI)
राष्ट्रीयराजमार्ग– 34, बसन्तपुर, सागूना, कल्याणी, ज़िला – नदिया, पश्चिमबंगाल - 741245
NH-34 Connector, Basantapur, Saguna, Kalyani, District Nadia, West Bengal 741245

PDCC in Joint Replacement & Reconstruction

1)Name of the Course –

Post Doctoral Certificate Course (PDCC) in Joint Replacement & Reconstruction, Department of Orthopaedics, AIIMS Kalyani.

2)No of Seats Per course – 2

Eligibility –MS/Dip/DNB (orthopaedics) passed from Medical Council of India (MCI) recognized institutes. Applicants with educational excellence and a keen interest in participating in the research program will be given priority.

Duration of Course- One year

Selection & assessment – As per guidelines

3)Introduction and Overview

The Department of Orthopaedics, AIIMS Kalyani, Arthroplasty/ Joint reconstruction (knee and hip) PDCC program is designed to provide comprehensive training for the individual who wishes to practice hip and knee replacement surgery in either private practice or an academic setting. The student will have a diverse experience in both the clinic and operating room with the opportunity to diagnosis and treat a wide spectrum of pathology. A balanced, evidence-based, patient-centric, value-drive approach is emphasized in all phases of patient care.

The student will gain experience in the evaluation and management of arthroplasty patients throughout the entirety of their treatment course. The student will be afforded progressive responsibility in both the operating room and clinic. The student is expected to learn a systematic approach to the arthritic patient and to the patient with a poorly performing arthroplasty. The student will learn to develop a comprehensive treatment plan including workup, implant selection, approach and post-operative plan. The student will develop confidence in surgical approaches for primary hip (anterior and posterior), primary knee (quad split and vastus split) as well as revision hip (extended trochanteric osteotomy) and revision knee (patellar peel, quad snip, and tibial tubercle osteotomy). The student will be expected to be independent in the performance of primary hip and knee arthroplasty.

4)Aims and Objectives / Goals and Principles

a) Patient care

The student must be able to provide patient care that is compassionate, appropriate, patient centered and effective for the diagnosis treatment of orthopaedic pathology, degenerative arthritis and the promotion of health. Demonstrate caring and respectful behaviours (verbal and non-verbal) with patients and families.

b) Medical Knowledge

The student must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioural sciences, as well as the application of this knowledge to patient care.

c) Practice- Based Learning and Improvement

The student must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evulation and lifelong learning.

d) Systems based practice

The student must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as be able to effectively call on their resources in the system to provide optimal health care.

e) Professionalism

The student must demonstrate commitment to carrying out professional responsibilities and an adherence to ethical principles.

f) Interpersonal and communication skills

The student must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

5) Infrastructure to run the course – Clinical Practice and Expertise Available

Course Co-coordinator – Dr. Amit Kumar

Faculty – All the faculty in our department

Facilities & Resources – The department of Orthopaedics, AIIMS Kalyani is a tertiary level teaching cum referral autonomous institute. It is one of the few institutes in this countries. At present this institute is around 60 bedded department. The footfall in outpatient department is around is 200 to 250 per day. At our department we operate around 8 to 10 joint replacement per month.

The student will work directly with each of the Joint Reconstruction Division Faculty. The student can expect to participate in a range of joint reconstruction cases from primary hip and knee replacement to complex revision surgery for failed or infected arthroplasty. The student should expect to be in the operating room at least 2 days per week with 2 day reserved for seeing patients in the outpatient clinic and 1 day for research.

We have all the supporting departments running full-fledged to support our courses –

1. Department of Radiology with X-ray units, CT scan, MRI, DSA and USG
2. Department of Internal Medicine with Endocrinology Support
3. Department of Pain and Palliative Medicine
4. Department of Cardiology to support high risk patients
5. Fully equipped ICU and HDU set ups
6. Facility of Private wards and Isolation rooms for special needs
7. Upgraded department of Physiotherapy with all modern equipment.
8. Department of Community and Family Medicine – to support our research.
9. Department of Anatomy and Forensic with state of the art facility for cadaveric Dissection and training

6) Teaching Schedule (Organization Of Training/ How Will You Train)

Educational Program and Syllabus

Theatre: twice per week

Weekly meetings: The student will be expected to participate in all of the Joint Service meetings as well as the regular departmental meetings.

1. Monday: Orthopaedics department Grand Rounds (2x/month)
2. Friday: Indications 9review of the following week's cases)
3. Saturday: Resident Education and journal club and seminar (Alternative week)

Monthly meetings:

1. Department Morbidity & Mortality – once every three months

2. Department Journal Club specific to Lower Limb Arthroplasty to be presented by PDCC Student – every month
3. Joint Practice Council (representatives from all phases of care meet to discuss process improvements; Anaesthesiologist, Physician, Cardiologists, Physiatrist, Rheumatologist, Pulmonologists and Endocrinologists, ICU in-charge/HDU in-charge) once every three months
4. All providers meeting (from the Dept. of Physiotherapy, Occupation Therapy, administration, nursing, review processes and areas for Quality Improvement) – Once every three months
5. Research updates – Joint Clinical Community (meeting of representative from all concerned department who are part of research projects which are undergoing or any new upcoming projects proposals, to discuss harmonization projects within the Joint Replacement Programs)
6. The student is required to present a poster/oral presentation in a speciality conference and complete at least one research project which should be published/ submitted for publication in a Pubmed indexed journal to make him eligible to appear in the exit exam. There are numerous opportunities for clinical, biomechanical, and bench research depending on the individual interests of the student. Inter-departmental collaboration is encouraged. The department has an understanding with department of Community and Family Medicine and they have full time editorial staff to help facilitate publication of all manuscripts generated during the studentship year.
7. Student performance will be subject to daily formative evaluation in the operating room, and the clinic. The student will receive specific formative evaluation bi-annually from the studentship Director.

7) <u>Syllabus:</u>

1. Elicit complete patient medical history information using effective questioning and listening skills

2. Perform a comprehensive orthopaedics evaluation and physical exam for degenerative, inflammatory, and post traumatic arthritis and deformities, with special attention to pain, range of-motion, instability, and function.

3. Formulate a medical and surgical problem list delineating goals to be archived, and complications to be avoided when reconstructive surgery is performed.

4. Learn to prevent intra-operative technical complications during hip and knee arthroplasty.

5. Make an early diagnosis and provide prompt treatment of acute post-operative complications, including hypotension, nerve palsy, DVT, PE, wound dehiscence and infection.

6. Integrate the clinical presentation of hip and knee pain with imaging data to make decisions regarding operative care.

7. Assess post-operative progress of arthroplasty patients.

8. Follow developed care pathways

9. Counsel patients and families and caregivers about the plan of care.

10. Be a vital part of the inpatient team under the supervision of attending faculty.

11. Identify and provide post-arthroplasty precautions and goals for therapists.

12. Diagnose and treat hip implant dislocations in the emergency department, when appropriate, under faculty supervision.

13. Utilize treatment algorithms for the work up and treatment of the infected arthroplasty

14. Be capable of independently performing primary hip and knee arthroplasty

15. Plan and perform revision total hip and knee arthroplasty under supervision

16. Understand and use the classification systems for periprosthetic fractures and bone loss in hip and knee arthroplasty.

17. Discuss and understand the biomechanics of hip and knee arthroplasty.

18. Know and describe the surgical steps and relevant anatomy during the anterior and posterior approaches to the hip.

19. Know and describe various approaches for total knee arthroplasty (quad split, subvastus, vastus split, rectus snip, etc.)

20. Know and understand implant options for the hip and knee arthroplasty, based on anatomical and patient characteristics.

21. Know and understand evaluation of patients with failed arthroplasty and post - traumatic arthritis.

22. Promptly identify common post – arthroplasty complications and discuss their prevention

23. Know and be able to cite outcome studies, and factors that predispose to complications for hip and knee arthroplasty

24. Know appropriate study design for the evaluation of an arthroplasty technique or specific implant.

25. Differentiate patients who are best treated by non – operative means.

26. Evaluate one's own knowledge, incorporating feedback from others, specially faculty and chief resident(s).

27. Modify self – directed learning appropriately

28. Appraise and assimilate evidence from scientific studies to enhance patient care , spaecially as it relates to hip and knee arthroplasty and reconstructive diagnoses and treatments

29. Effectively use information technology to access and manage patient information

30. Effectively use information technology and other resources to support one's own ongoing self-education (Arthroplasty DVDs, CDs, Vumedi, etc.)

31. Contribute to discussions concerning patient care with other health care professionals, physiotherapists, and consultants

32. Attend and participate in teaching departmental meetings and rounds

33. Collaborate with and maintain appropriate professional attitudes and behaviors towards other medical professionals and ailed health personnel.

34. Assess how one's own actions affect others, especially in the arthroplasty service setting

35. Integrate the care of arthroplasty patients in inpatient setting, use clinical pathways.

36. Use diagnostic and therapeutic procedures appropriately and judiciously

37. Carefully and thoughtfully evaluate the risks, benefits, limitations, and costs of patient care

38. Provide data for Morbidity and Mortality conferences to positively affect patient care.

39. Participate in clinical pathways designed to improve patient outcomes

40. Serves as patient advocate in dealing with system complexities.

41. Work effectively with other services, health care agencies, and case managers

42. Work to improve the system of medical care at all service locations

43. Provide information on system issues that may improve patient care (this performed at departmental meetings)

44. Exemplify and display and observable respect and compassion toward patient

45. Exemplify reliability, punctuality, integrity, and honesty.

46. Accept responsibility for one's own actions and decision

47. Apply sound ethical principles in medical practice, including issues of patient confidentiality informed consent, provision for withholding care and interaction with insurance companies and disability agencies.

48. Consider the effects of personal, social, and cultural factors in the disease process and patient management

49. Demonstrate nom-judgmental sensitivity and responsiveness to the age, culture, disability status and gender of patients and colleagues

50. Establish trust and maintain rapport with patients and families

51. Complete dictation and chart notes in a timely manner (Monitored by medical records department and rotation coordinator)

52. Discuss diagnosis, prognoses, and chart notes in a timely manner (mentioned by medical records department and rotation coordinator)

53. Synthesize information and present clinical and diagnostic information clearly and accurately to patients

54. Synthesize information and present clinical and diagnostic information clearly to colleagues

55. Utilize effective listening skills

56. Communicate and interact with staff/team in respectful, responsive manner

57. Promote teamwork, and coordinate the workup and treatment of patients on the arthroplasty service.