

**PROPOSAL FOR POST-DOCTORAL CERTIFICATE COURSE (PDCC) IN
HEPATOBILLIARY SCIENCES**

DEPARTMENT OF MEDICINE

KING GEORGE'S MEDICAL UNIVERSITY, LUCKNOW

Preamble:

Hepatobiliary sciences incorporate the study of liver, gallbladder, biliary tree, and pancreas as well as management of their disorders. Although traditionally considered a sub-specialty of gastroenterology, rapid expansion has led in some countries including India to doctors specializing solely on this area, who are called hepatobiliopancreatologist (HPB specialist).

Diseases and complications related to viral hepatitis, alcohol and gallstones are the main reason for seeking specialist advice. More than two billion people have been infected with hepatitis B virus at some point in their life, and approximately 350 million have become persistent carriers. Up to 80% of liver cancers can be attributed to either hepatitis B or hepatitis C virus. In terms of mortality, the former is second only to smoking among known agents causing cancer. With more widespread implementation of vaccination and strict before blood transfusion, lower infection rates are expected in the future. In our country, overall alcohol consumption is increasing, and consequently the number of people with cirrhosis and other related complications is commensurately increasing. Gallstones and its complications including cholangitis, acute pancreatitis and malignancy account for significant disease burden to the society.

The PDCC in Hepatobiliary Sciences is designed to provide a diversified, organized educational environment that will allow the candidate to develop both the clinical and research skills in liver, gall bladder and pancreas related disorders and emergencies, necessary to become an academic hepatobiliopancreatologist. The program is dedicated to develop individual careers by providing a strong basic foundation in clinical and laboratory research that allows each trainee freedom to choose their career goals.

Relevance for our university in present scenario

In this present COVID era, studies have shown that patients with liver involvement have higher mortality. The PDCC in Hepatobiliary emergencies

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will provide specialised care and a chance to study this in detail. KGMU is premier institution of a highly populous state and the has a functional medical and surgical gastroenterology units but that providing specialised care to critically ill patients related to liver, biliary and pancreatic disorders is lacking. Many of the problems like acute upper GI bleed need 24 hour availability of specialists. There is a definite need of a dedicated hepatobiliary emergency center for such a large tertiary care centre to fill this gap.

Relevance to our department

Our department has post-MD senior resident posts. Many of our senior residents have complaints that they learn only administrative skill during their Medicine senior residency, extra clinical or technical skills are hardly learnt. This leads to vacant posts of SRs for prolonged periods every year in our department. This course will not only provide them extra acumen to acquire and fill this gap but also help our department to retain the trained manpower for better administrative and clinical management.

Course Director:

Dr. V Atam, Professor and Head, Department of Medicine, King George's Medical University, Lucknow.

Faculty-in-charge

Dr Ajay Kumar Patwa, Additional Professor, Department of Medicine, King George's Medical University, Lucknow.

Co-faculty

1. Dr K K Sawlani, Professor, Department of Medicine, King George's Medical University, Lucknow.
2. Dr K K Gupta, Additional Professor, Department of Medicine, King George's Medical University, Lucknow.
3. Dr Vivek Gupta, Additional Professor, Department of Surgical Gastroenterology, King George's Medical University, Lucknow.
4. Dr Ajay Kumar Singh, Professor, Department of Pathology, King George's Medical University, Lucknow.
5. Dr Preeti Agrawal, Associate Professor, Department of Pathology, King George's Medical University, Lucknow.

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6. Dr Amita Jain, Professor and Head, Department of Microbiology, King George's Medical University, Lucknow.
7. Dr Manoj Kumar, Professor, Department of Radiodiagnosis, King George's Medical University, Lucknow.
8. Dr Manish Kumar Singh, Additional Professor, Department of Anaesthesiology, King George's Medical University, Lucknow.
9. Dr Suruchi Shukla, Associate Professor, Department of Microbiology, King George's Medical University, Lucknow.

Visiting Faculty:


1. Dr Rakhi Malwal, Additional Professor, Department of Hepatology, Institute of Liver and Biliary Sciences, New Delhi.
2. Dr C E Eapen, Professor and Head, Department of Hepatology, GMC, Vellore, Tamilnadu.
3. Dr Praveer Rai, Professor, Department of Gastroenterology, SGPGIMS, Lucknow.
4. Dr Pramod Kumar Garg, Professor, Department of Gastroenterology, AIIMS, New Delhi.






Facilities available:

1. Outdoor: Our department has specialized outdoor clinic for hepatobiliary disorders.
2. Indoor: We have indoor, which are full of patients with hepatobiliary disorders.
3. Endoscopy lab: Our endoscopy lab is performing all the routine diagnostic as well as therapeutic procedures.
4. Emergency and Intensive care unit: is functioning 24 hours.

Role of other Departments:

1. Histopathology: For training of the candidate in the routine histopathological investigation related to hepatobiliary sciences.
2. Microbiology: For training in relevance to hepatobiliary sciences.
3. Radiodiagnosis: For training of the candidate in interpretation of various radiologic diagnostic procedures in relevance to hepatobiliary sciences like X-Ray, USG, CT scan, MRI, Interventional radiology etc.


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4. **Surgery and surgical gastroenterology:** For familiarizing the candidate with the surgical procedures in relevance to hepatobiliary sciences including liver transplantation.

Owing to a larger population and lack to dedicated hepatobiliary centers, there is an urgent need for human resource development in this area. It is therefore proposed to start a one year training program in hepatobiliary sciences at the KGMU. This course can be called Fellowship in Critical Care Hepatology. Offering such a speciality course will greatly benefit the candidate, the department, the institution and the state.

Post-Doctoral certificate course (PDCC) in Hepatobiliary Sciences

Course duration and fee structure: will be same as decided by our university guidelines for other PDCC courses.

Maximum no. of candidate to be admitted/year: 2

Eligibility: MD/DNB in Medicine or Pediatrics.

Selection: The posts will be advertised. Intersted candidates will have to take a written MCQ test followed by interview. MCQ questions will be in Medicine and Hepatopancreatobiliary sciences.

Salary: Senior Residents working in the department will be eligible to apply and will receive a salary as for senior resident. However, if the candidate is already in employment he/she will be paid by employer.

Accomodation: If available, will be provided by University.

Leave: Same rule as for Senior Residents will apply.

Course structure & contents:

The Divison of hepatobiliary sciences will also organize its academic program for the candidate as follows:

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1. Clinical hepatology teaching conference/seminar (weekly)
2. Liver board (weekly)
3. Inpatient hepatology patient care conference (weekly)
4. Social Service/Psychological conference (weekly)
5. Histopathology conference (weekly)
6. Journal club (weekly)

The candidate would participate in all teaching activities both intradepartmental as well as interdepartmental like:

1. Admission rounds
2. Clinico-pathological conferences
3. Mortality meetings
4. Ward rounds
5. Journal Clubs
6. Seminar

Syllabus

1. Anatomy and Developmental Anomalies of the Liver
2. Liver Physiology and Metabolic Function
3. Biochemical Liver Tests
4. Inherited Metabolic Disorders of the Liver
5. Hereditary Hemochromatosis
6. Wilson Disease
7. Viral Hepatitis A Through G
8. Liver abscess and Bacterial, Parasitic, Fungal and Granulomatous Liver Disease
9. Vascular Disease of the Liver
10. Alcoholic Liver Disease
11. Nonalcoholic Steatohepatitis and Focal Fatty Liver
12. Liver Disease caused by Drugs, Anesthetics, and Toxins
13. Pregnancy-Related Hepatic Disorders

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14. **Hepatic Manifestations of Systematic Disorders**
15. **Autoimmune Hepatitis**
16. **Primary Billiary Cholangitis**
17. **Portal Hypertension and Gastrointestinal Bleeding**
18. **Ascites and Spontaneous Bacterial Peritonitis**
19. **Systemic Complications of Liver Disease**
20. **Acute liver failure**
21. **Acute on chronic liver failure**
22. **Hepatic Tumors and Cysts**
23. **Liver Transplantation**
24. **Anatomy, Anomalies and Pediatric Disorders of the Billiary Tract**
25. **Bile Secretion and the Enterohepatic Circulation of Bile Acids**
26. **Gallstone Disease and Its Complications**
27. **Acute Acalculous Cholecystitis, Adenomyomatosis, Chloesterolosis, and Polyps of the Gallbladder**
28. **Primary Sclerosing Cholangitis and Recurrent Pyogenic Cholangitis**
29. **Tumors of the Gallbladder, Bile Ducts, and Ampulla**
30. **Endoscopic and Radiologic Treatment of Billiary Disease**
31. **Anatomy, Histology, Embryology, and Developmental Anomalies of the Pancreas**
32. **Pan reatic Physiology and Secretary Testing**
33. **Hereditary and Childhood Disorders of the Pancreas**
34. **Acute and Chronic Pancreatitis**
35. **Pancreatic Cancer**
36. **Endocrine Tumors of the Pancreas**
37. **Other Tumors and Disease of the Pancreas**
38. **Basics of gastrointestinal endoscopy**

Generic component of the Training:

1. **Good Professional practice: Trainees must appreciate the need of relationship of trust between the profession and the society. A good doctor should be able to have effective communication, ethical practice,**

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honesty, transparency and concerns about the patient safety. Effective communication skills with patients, families and colleagues and cooperation and collaboration with colleagues to achieve quality care. Ethical and legal decision skills and minimizing medication and procedural errors as well as annual workplace based assessment, consultant feedback and suggestions will be key components of the course.

2. Infection control: Trainee should be able to appropriately manage infections and risk factors for infection at an institutional level including prevention of hospital acquired infections and cross infections.
3. Self-care and maintaining wellbeing: Trainers should be taking care of self-awareness, personal health, personal growth, personal lives, values and attitudes. They should care for themselves physically and emotionally.
4. Communication skills in clinical and professional setting: Trainees will develop communication skills so that they communicate effectively and sensitivity with patients, relatives, carers and professional colleagues in different situations.
5. Leadership: Trainee should be able to play a leadership role and work with colleagues to plan, develop services and improve care and services delivery. He should understand the importance of good communication in terms and the role of human interactions on effectiveness and patient safety.
6. Scholarship: Trainee should be able to develop skills in personal/professional development, teaching, educational supervision and research methodology, valid statistical analysis, writing and publishing papers.
7. Standards of care: to be able consistently and effectively assess and treat patient problems.
8. Dealing with Emergencies: Trainees should be able to initiate management of patients presenting as emergencies and to appropriately communicate the diagnosis and prognosis. They should be able to make a quick differential diagnosis and ask relevant investigations and treat or refer as appropriate.

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Research activities:

In addition to prospectively following their cases for 1 year, the candidate would be encouraged to undertake independent research projects and also actively associate with the ongoing research activities. He/she would be expected to publish the result of his/her research in journals of repute.

At the end of the course, the student will be able to:

- 1- Evaluate a patient with suspected hepatobiliary disorders.
- 2- Competent in identifying and managing hepatobiliary emergencies.
- 3- Able to plan investigations for confirmation of diagnosis and staging/risk stratification of hepatobiliary disorders.
- 4- Perform independently various procedures in hepatobiliary practice including endoscopy, liver biopsy, pleural and ascitic fluid paracentesis etc.
- 5- Able to interpret lab investigations of benign and hepatobiliary disorder.
- 6- Competent in counselling the family of a patient with hepatobiliary disorders and breaking a bad news.
- 7- Be confident with basic principles of radiotherapy in management of hepatobiliary tumors.
- 8- Research: The student will be to conduct a literature search, critically appraise published literature, develop a research proposal, conduct and analyze a research study and write a paper for publication.

Administrative:

- 1- Communicate effectively with patients and their families regarding their problem and its solution, counsel family members regarding the problem.
- 2- Develop the skills for teaching hepatobiliary science.
- 3- Be a team leader in multidisciplinary management of hepatobiliary disorders.

FINAL ELIGIBILITY ASSESSMENT FOR AWARDED THE FELLOWSHIP:

Exit examination will comprise of:

Theory paper three- 2 hours each

- 1- Basic science in hepatopancreaticobiliary disorders
- 2- Clinical hepatobilopancreatology
- 3- Recent advances

Practical examination

- 1- One long case

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2- Two short case

3- Practical viva voce/spots

Examiners: One internal and one external examiner (Hepatology)

On satisfactory completion of the course, the student will get **Post-Doctoral certificate course (PDCC) in Hepatobiliary Sciences** of King Georges Medical University.



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