

2009-10

HEPATOLOGY

Faculty

Professor and Head	Y.K. Chawla	MD, DM, FAMS, FACG
Additional Professors	R.K. Dhiman	MD, DM, MNAMS, FACG
	Virendra Singh	MD, DM
Assistant Professor	Ajay Duseja	MD, DM, MNAMS, FACG

Prof. Y. Chawla was invited to chair a session on “Non Responders in Chronic Hepatitis C” at the 5th APASL Single Topic Conference meeting at Turkey from May 17-20, 2009. He was invited to chair a free paper session on “Hepatocellular Carcinoma (HCC)” at the 3rd International Kobe Liver Symposium (IKLS) at Kobe, Japan from June 6-7, 2009. He was invited as a Guest Speaker at the British Association for the Study of liver (BASL) Annual Meeting at Imperial College, London from September 9-11, 2009. He was invited to chair a session on “Complications in Cirrhosis” and presented two papers at American Association for Study of liver held at Boston from October 23 to November 3, 2009. He was invited as a Faculty for a session at the 6th APASL Single Theme Conference on “Acute Liver Failure: Asian-Pacific Perspectives” and spoke on Acute Liver Failure in pregnancy from December 10-12, 2009 at Karachi, Pakistan. He chaired 3 sessions and presented a paper at the 20th conference of the Asian Pacific Association for the Study of the Liver from March 25-28, 2010 at Beijing. He was invited to deliver a lecture on “Management aspects in Hemangioma” at the Mid-term INASL meeting at Sir Ganga Ram Hospital, New Delhi from September 5-6, 2009. He was invited to deliver a talk on “Non Alcoholic fatty liver disease (NAFLD)” in the National Research Society for the Study of Diabetes in India 2009 at Ahmedabad. He was invited as a Speaker on “Current Treatment of Hepatitis C” at the Annual APICON 2010 held at Jaipur from January 7-10, 2010. He was invited as a Guest Faculty at the 1st ILBS-NIH Symposium on “Hepatitis Viruses and HIV at the Institute of Liver and Biliary Sciences, New Delhi from March 6-7, 2010 He was invited to chair a session at the INASL meeting at Bhubaneswar from March 11-14, 2010.

Dr R K Dhiman was elected 'Executive Member' of prestigious international body – International Society of Hepatic Encephalopathy and Nitrogen Metabolism for years 2008 to 2011. He was invited as a Guest Faculty of the Indian National Association for the Study of Liver 2010 Conference at Bhubaneswar from March 11-14, 2010 and delivered lectures on 'Is minimal hepatic encephalopathy a real entity?' and 'Retreatment of Chronic Hepatitis C - Relapsers and Non-responders.' He was invited as a Guest Faculty of the Indian Society of Gastroenterology 2010 Conference at Kolkatta and delivered lecture on 'Do Probiotics Really Help in Hepatic Encephalopathy?' He was invited to give a talk on "The Role of EUS in portal hypertension" at the Third International Conference on Endoscopic Ultrasound 2009 held at Jaswant Rai Hospital, Meerut from September 12 -13, 2009. He was invited to give a talk on "Management of acute Liver Failure" at the Physician Forum, Chandigarh in September 2009. He was invited to give a talk on 'Managing Hepatitis C Virus Infection: Physician Perspective' and 'Management of Hepatic Encephalopathy' by Physicians' Forum, Shimla in May and June 2009. He was invited to give a talk on 'Chronic Hepatitis C: Current Management' at the Annual Conference of Alumni Association of Amritsar Medical College on February 18, 2010 in Amritsar.

Dr. Virendra Singh attended Annual Conference of American Association for Study of Liver Disease held at Boston, USA in Nov.2009. He received International Travel Grant from Indian Society of Gastroenterology for attending APDW 2009 at Taipei (Taiwan) in September 2009. He delivered ISG-Astra Oration for the year 2009 at Annual Conference of Indian Society of Gastroenterology held at Kolkatta in Dec.2009. He is a Member, Editorial Board of World Journal of Gastroenterology. American Society of Gastrointestinal Endoscopy selected him as an ASGE Ambassador to teach and train physicians, the endoscopic medical care at centers around the world and alongwith other Ambassadors trained physicians at pilot Ambassador Program at its Training Center in Cairo, Egypt from February 19-26, 2010. He delivered guest lecture entitled "Endoscopic Management of Biliary Tract Diseases" on March 20, 2010 during Golden Jubilee Celebration of Institute of Medical Sciences, Banaras Hindu University, Varanasi.

Dr Ajay Duseja received the prestigious Dr Dharamvir Datta Memorial Oration Award for the year 2006 from the Indian Council of Medical Research (ICMR) for his research contribution in the field of Nonalcoholic Fatty Liver Disease (NAFLD) in India. He participated in the Training of Trainers workshop on Health Technology Assessment (HTA) organized by SIGNET (Singapore Indian Group Networking for Empowerment Training) at Singapore General Hospital, Singapore in June 2009. He also participated and presented a paper at the annual meeting of the British Association of Study of Liver (BASL) held at Imperial College London in September 2009. During the same visit, he visited King's College Hospital London, Sheila Sherlock Liver Center at Royal Free Hospital, London and Liver Transplant center at Addenbrook's Hospital, Cambridge, UK. He was a guest speaker on 'Focal Nodular Hyperplasia' at the single theme conference organized by Indian National Association of Study of Liver (INASL) at Sir Ganga Ram Hospital in September 2009. He was a panelist in the session on 'Update in the management of liver diseases' at the Annual Conference of the Indian society of Gastroenterology (ISG) at Kolkata in December 2009. He was a guest speaker on 'End points in the management of chronic hepatitis B' at the Asia Pacific Symposium and INASL task force meeting on HBV at Mumbai in January 2010. He was an invited speaker on "Abdominal Examination for Residents' at the 'Gastroenterology Young Masters - Training Program' organized by Indian Society of Gastroenterology (ISG) at Gurgaon in Feb 2010. He was a guest speaker on 'Is any treatment worthwhile in patients with NAFLD' and was a panelist in the symposium on 'Management of chronic hepatitis C' at the annual conference of the INASL at Bhubneshwar in March 2010. He was a co- author in the paper "Increased atherosclerosis and cardiovascular risk in patients with nonalcoholic fatty liver disease (NAFLD)" which received the third prize in the plenary session of the annual conference of the INASL at Bhubneshwar in March 2010.

Service

An outpatient liver clinic is conducted every Monday and Friday. A total of 11641 old and 3077 new patients were seen in liver clinic during 2009-2010.

During the year investigations performed included:

Name of Test/Procedure	2009-2010	2008-2009	2007-2008
UGI Endoscopies	1570	1409	1549
Lower GI Endoscopies	30	101	110
ERCPS	377	226	240
Ultrasound	3350	2811	2260
Liver function tests	3066	2695	3761
Anti HCV	5010	2721	4722
HBsAg	5000	3140	4650
HBeAg/Anti HBe	1000/520	1015	1732
Anti HEV (IgM)	786	430	-
Anti HBc (IgM)	220	187	-
Anti HBc (total)	88	100	-
Anti HBs	77	-	-

These services were rendered to outpatients, patients attending special clinics, emergency and indoor patients.

Training

Residents of Internal Medicine rotated through the department for training imparted through regular sessions of clinical case discussions, topic discussions, hepato-radiology rounds, seminars, liver biopsy rounds and journal clubs. They were also trained to perform bedside procedures like liver biopsy, abdominal paracentesis, etc.

For the first time in the country, the department has started the DM programme in Hepatology and has taken five students in the year 2008-09 and two in 2009-2010. Five PhD students are undergoing training in the Department.

Research completed

1. Usefulness of inhibitory control test for the diagnosis of minimal hepatic encephalopathy (DM thesis sanctioned by PGI)

Minimal hepatic encephalopathy (MHE) is the mildest form in the spectrum of hepatic encephalopathy, the psychometric hepatic encephalopathy score (PHES) was recommended for the diagnosis of this condition. ICT is reliable and sensitive tool for diagnosis of MHE and can also predict overt episodes of HE. We assessed the usefulness of ICT for the diagnosis of MHE and for the prediction of the development of overt episodes of HE. ICT has low sensitivity for the diagnosis of MHE and does not predict overt episodes of HE and sensitivity.

2. Alterations in expression of genes coding for key astrocytic proteins in frontal cortex of autopsied brain tissues of patients with acute liver failure and of patients with liver cirrhosis and hepatic encephalopathy (ICMR Private Grant)

The mRNA expression of the astrocyte protein, EAAT-1 was significantly increased by 4.55 folds (P=0.017) in ALF and 2.77 folds (P=0.036) in cirrhosis patients compared to controls, but the no significant change observed in of EAAT-2 expression. The AQP-4 expression was significantly increased by 3.21 folds (P=0.009) in ALF and 2.2 folds (P=0.041) in cirrhosis patients compared to controls. The GFAP expression was significantly decreased by 78% (P=0.001) in ALF and 60% (p=0.039) in patients with cirrhosis compared to controls..

3. Extrapyrmidal Signs in Patients with Cirrhosis Who Have Minimal Hepatic Encephalopathy (MD thesis sanctioned by PGI)

This study aimed to find out the prevalence of EPS in cirrhotic patients, to investigate the relationship between EPS and minimal hepatic encephalopathy (MHE)/cognitive impairment and the influence of EPS on health-related quality of life (HRQOL). This study demonstrated a relationship between the presence of cognitive impairment and EPS in patients with cirrhosis of liver. Patients with EPS had worse quality of life as measured by SF-36.

4. Role of cytokines and oxidative stress in patients with nonalcoholic steatohepatitis (NASH). (ICMR)

Twenty-five patients with nonalcoholic fatty liver disease (NAFLD) were analyzed for various cytokines and oxidative stress. Results were compared with age and BMI matched 25 chronic viral hepatitis (CVH) patients and 25 healthy volunteers (HV). Higher serum TGF- β levels in patients with CVH in comparison to NAFLD suggest higher hepatic fibrosis in patients with CVH. Differences in the markers of oxidative stress and anti-oxidant status between NAFLD, CVH and healthy volunteers suggest higher oxidative stress in patients with NAFLD.

Research in Progress

ICMR

1. A multicentric Randomized Controlled Clinical Trial of Adefovir, Adefovir + Lamivudine, and Combination of Adefovir and Glycyrrhizin in HBV related Decompensated Cirrhosis. (ICMR)
2. Alterations in gene expressions coding for key astrocytic and neuronal proteins in patients who have died from acute liver failure or chronic liver failure associated with hepatic encephalopathy. (ICMR)

Pharmaceutical funded

3. An open label, response adaptive study of Telbivudine in adults with HBeAg positive compensated Chronic Hepatitis B (Novartis)
4. Supplementation with a probiotic preparation, VSL#3 as a support pharmaceutical therapy in cirrhotic patients for the treatment of minimal hepatic encephalopathy (MHE); A double-blind, randomized, placebo controlled study. (CD Pharma).
5. Small Intestine bacterial overgrowth and role of probiotic, VSL#3 in patients with Nonalcoholic Fatty Liver Disease (NAFLD). (CD Pharma)

Departmental

6. To study the protective effect of Nrf2 gene against oxidative stress and inflammation in frontal cortex and cerebellum regions of brain and blood in acute hyperammonemic rats.
7. Midodrine and clonidine in refractory ascites in cirrhosis.
8. Noradrenaline and terlipressin in hepatorenal syndrome.
9. Contrast-free air cholangiography-assisted unilateral stenting in malignant hilar biliary obstruction Correlation of visceral adipose tissue with metabolic syndrome and liver histology in patients with nonalcoholic fatty liver disease (NAFLD).
10. Correlation of visceral adipose tissue with metabolic syndrome and liver histology in patients with nonalcoholic fatty liver disease (NAFLD).
11. Toll like receptor (TLR) gene expression and polymorphism in patients with nonalcoholic fatty liver disease (NAFLD).

Indexed publications

1. Chawla Y, Duseja A, Dhiman RK. Review article: the modern management of portal vein thrombosis. *Aliment Pharmacol Ther.* 2009 ;30 :881-94.
2. Duseja A, Chawla Y. Treatment of HCV cirrhosis--simple or not quite so? *Trop Gastroenterol* 2009; 30:183-85.
3. Duseja A, Dhiman RK, Chawla Y, Thumburu KK, Kumar A, Das A, Bhadada S, Bhansali A. Insulin resistance is common in patients with predominantly genotype 3 chronic hepatitis C. *Dig Dis Sci* 2009 ;54:1778-82.
4. Duseja A, Das A, Chawla YK, Bhansali A, Sakhuja V. Clinicopathological conference: fibrosing cholestatic hepatitis presenting as subacute hepatic failure in a non-transplant patient. *Dig Dis Sci* 2009 ;54: 2341-45.
5. Gupta V, Singh V, Kalra N, Vaiphei K. Pancreas sparing resection for giant hamartoma of Brunner's glands *JOP* 2009; 10:196-99.
6. Kiran M, Chawla YK, Kaur J. Methylation profiling of tumor suppressor genes and oncogenes in hepatitis virus-related hepatocellular carcinoma in northern India. *Cancer Genet Cytogenet.* 2009; 195:112-19.
7. Kiran M, Chawla YK, Jain M, Kaur J. Haplotypes of microsomal epoxide hydrolase and x-ray cross-complementing group 1 genes in Indian hepatocellular carcinoma patients. *DNA. Cell Biol* 2009; 28:573-77.
8. Kiran M, Saxena R, Chawla YK, Kaur J. Polymorphism of DNA repair gene XRCC1 and hepatitis-related hepatocellular carcinoma risk in Indian population. *Mol Cell Biochem* 2009 ;327:7-13.
9. Noor MT, Lal A, Kochhar R, Singhal M, Sidhu GS, Srinivasan R, Rawat A, Dutta U, Dhiman RK, Chawla YK, Singh K. Autoimmune pancreatitis: a report from India. *JOP* 2010; 11: 213-19.
10. Sharma S, Sharma B, Singla B, Chawla YK, Chakraborti A, Saini N, Duseja A, Das A, Dhiman RK. Clinical significance of genotypes and precore/basal core promoter

mutations in HBV related chronic liver disease patients in North India. *Dig Dis Sci* 2010; 55: 794-802.

11. Sarin SK, Kumar A, Almeida JA, Chawla YK, Fan ST et al. Acute-on-chronic liver failure: consensus recommendations of the Asian Pacific Association for the study of the liver (APASL). *Hepato Int*. 2009 ;3:269-82.
12. Shiha G, Sarin SK, Ibrahim AE, Chawla YK, Omata M et al. Jury of the APASL Consensus Development Meeting 29 January 2008 on Liver Fibrosis With Without Hepatitis B or C. Liver fibrosis: consensus recommendations of the Asian Pacific Association for the Study of the Liver (APASL). *Hepato Int*. 2009; 3:323-33.
13. Saini N, Srinivasan R, Chawla Y, Sharma S, Chakraborti A, Rajwanshi A. Telomerase activity, telomere length and human telomerase reverse transcriptase expression in hepatocellular carcinoma is independent of hepatitis virus status. *Liver Int* 2009;29:1162-70
14. Sharma A, Chakraborti A, Das A, Dhiman RK, Chawla Y. Elevation of interleukin-18 in chronic hepatitis C: implications for hepatitis C virus pathogenesis. *Immunology* 2009;128:514-22.
15. Singh V, Bhalla A, Sharma N, Dheerendra PC, Agarwal R, Mahi SK.. Nasobiliary drainage in acute cholestatic hepatitis with pruritus. *Dig Liver Dis* 2009 ;41:442-45.
16. Singh V, Singh G, Gupta V, Gupta R, Kapoor R. Contrast-free air cholangiography-assisted unilateral plastic stenting in malignant hilar biliary obstruction. *Hepatobiliary Pancreat Dis Int* 2010 ;9:88-92.
17. Sharma N, Sharma A, Varma S, Lal A, Singh V. Amoebic liver abscess in the medical emergency of a North Indian hospital. *BMC Res Notes* 2010; 25:21.
18. Taneja S, Kalra N, Duseja A, Dhiman RK. Noncirrhotic portal fibrosis and abdominal varices. *Liver Int* 2010;30:715-17.
19. Vermani N, Kang M, Khandelwal N, Singh P, Chawla YK. MR cholangiopancreatographic demonstration of biliary tract abnormalities in AIDS cholangiopathy: report of two cases. *Clin Radiol* . 2009 ;64:335-38.
20. Virmani V, Khandelwal N, Kang M, Gulati M, Chawla Y. MDCT venography in the evaluation of inferior vena cava in Budd-Chiari syndrome. *Indian J Gastroenterol*. 2009;28:17-23.

Chapters in Books

1. Chawla YK. Non-Cirrhotic Portal Fibrosis : An Indian Perspective. In: Chattopadyyay TK. Editor. Gastrointestinal Surgery Annual Volume 16. Noida: Saurabh Printers Pvt Ltd.2009. p. 79-88 .
2. Dhiman RK. Hepatic Encephalopathy. In: Mehtab M, Rahman S. Editors. Rahman S. Liver, a complete book on Hepato-Pancreato-Biliary; 2009;p. 348-56
3. Singh V. Treatment of Hepatitis C. In: The Liver Annual-2009. An INASL publication Editors. Dwivedi M, Misra SP, pp.34-56.

(Awards and Honours)

Part I

Dr. R.K. Dhiman was elected executive member of prestigious international body – ISHEN for year 2008-2011. Dr. Virendra Singh delivered ISG-Astra Oration for the year 2009 at Annual Conference of Indian Society of Gastroenterology held at Kolkatta in Dec. 2009. Dr Ajay Duseja received the prestigious Dr Dharamvir Datta Memorial Oration Award for the year 2006 from the Indian Council of Medical Research (ICMR) for his research contribution in the field of Nonalcoholic Fatty Liver Disease (NAFLD) in India. Dr. Ankur Gupta received Best paper Award at Annual conference of Indian National Association for the Study of the Liver.

Departmental highlights

Part II- (Highlights)

9th PGI-AIIMS “Current Perspectives in Liver Diseases -2009” was organized jointly by the Department of Hepatology, PGIMER. and Department of Gastroenterology, All India Institute of Medical Science, New Delhi at Chandigarh on December 5th and 6th 2009.

Research highlights

Part – III

Inhibitory control test (ICT) has good sensitivity for the diagnosis of minimal hepatic encephalopathy (MHE) however it does not predict overt episodes of hepatic encephalopathy. Expression of genes coding for key astrocytic proteins are altered in frontal cortex of autopsied brain tissues of patients with acute liver failure and of patients with liver cirrhosis and hepatic encephalopathy. There is relationship between the presence of cognitive impairment and extra pyramidal signs in patients with cirrhosis of liver. Higher serum TGF- β levels in patients with CVH in comparison to NAFLD suggest higher hepatic fibrosis in patients with CVH. Differences in the markers of oxidative stress and anti-oxidant status between NAFLD, CVH and healthy volunteers suggest higher oxidative stress in patients with NAFLD.

ANNEXURE

List of Visiting Professors

1. Prof. J.B. Dilawari, Consultant Hepatology, Inverclyde Hospital, Glasgow, Scotland on 15th April 2009.
2. Prof. Alexander Gimson, Clinical Director, Division of Medicine, Liver Transplantation Unit, Cambridge University Hospitals, Cambridge 8-10 March 2010.

Dr. Daisy Sahni
Additional Professor & Head
and Co-Editor, Annual Report
Department of Anatomy
PGIMER, Chandigarh

Subject: Resubmission of 43rd Annual Report of PGIMER, Chandigarh for the year 2009-10.

Dear Dr. Sahni,

Please refer to your letter No.2K10/6681 dated 01.09.2010. I am resubmitting the 43rd Annual Report with CD for the year 2009-10 from the Department of Hepatology.

Thanking you,

Yours sincerely,

Y.Chawla

Encl: Annual Report with CD