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# 14<sup>th</sup> Annual Conference of PSSLD 2020

December 11 - 13, 2020 Karachi, Pakistan

**QUICK DECISIONS  
IN HEPATOLOGY**



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## MESSAGE

We are pleased and honored to inform our colleagues that the Pakistan Society for the Study of Liver Diseases (PSSLD) will be holding its 14th Annual Conference in Karachi, from 11-13 December 2020. The theme of the meeting is 'Quick Decisions in Hepatology'. Due to the COVID-19 pandemic, PSSLD Executive Council has decided to have a virtual meeting this year. It will be an exciting, educational meeting with many national and international speakers participating.

The conference will include, clinical vignettes, quiz competition, free papers, guided poster presentations, interactive symposia, and state of the art lectures on viral hepatitis, NAFLD, autoimmune liver diseases, hepatocellular carcinoma (HCC), portal hypertension, and liver transplantation. The meeting's content and activities are tailored to a wide audience of gastroenterologists, hepatologists, internists, general practitioners, and postgraduate students. We urge our colleagues to participate enthusiastically and honour us with their presence. It will be an exciting, educational meet for all. I look forward to welcoming you,



**Prof. Zaigham Abbas**  
*President PSSLD &  
Chair Organizing Committee*



**Dr. Amna Subhan Butt**  
*General Secretary, PSSLD  
Chair, Scientific Committee*

ORGANIZING  
ORGANIZING  
COMMITTEE  
COMMITTEE





# ORGANIZING COMMITTEE

## Founding President

Prof. Wasim Jafri

## Steering Committee:

Prof. Wasim Jafri

Prof. Saeed Hamid

Prof. Masood Siddiq

Prof. Zaigham Abbas

## President PSSLD &

## Chair Organizing Committee

Prof. Zaigham Abbas

## Chair Scientific Committee

Dr. Amna Subhan Butt

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Dr. Adil Naseer

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**International Faculty****Country**

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Damien M. Y. Tan	(Singapore)
Kenneth Binmoeller	(USA)
Kenneth J. Chang	(USA)
Adeel Ajwad Butt	(USA)
Yogesh Chawla	(India)
Shiv Kumar Sarin	(India)
Necati Ormeci	(Turkey)
Ibrahim Mostafa	(Egypt)
Jordi Gracia-Sancho	(Spain)
Anil Arora	(India)
Rajender Reddy	(USA)
Tawesak Tanwandee	(Thailand)
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Arun Sanyal	(USA)
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Jasmohan Bajaj	(USA)
Zobair M Younossi	(USA)
Bilal Hameed	(USA)
Khalid Mumtaz	(USA)
Mohamed Rela	(India)
Rosmawati Mohamed	(Malaysia)
Peter Galle	(Germany)
Ashok Choudhury	(India)
Sudhamshu K. C.	(Nepal)
Desmond Ladden	(Canada)
Dong-Joon KIM	(Korea)
Mohamed Alborai	(Egypt)
Ananta Sharesta	(Nepal)
Christopher Khor	(Singapore)
Nonthalee Pausawasdi	(Thailand)
Nadeem Tehami	(UK)

## National Faculty

Abdul Basit	Junaid Saleem
Abdul Qadir	karim kammeruddin
Abdul Qayyum Memon	Kashif Malik
Abdul Rauf Memon	Masood Siddiq
Abdul Wahab Dogar	Masroor Ahmed
Abdullah Bin Khalid	Muhammad Salih
Abrar Sheikh	Nasir Luck
Abu Bakar Hafeez Bhatti	Nauman zakir
Adeel Butt	Nazish Butt
Akif Dilshad	Nusrat Yar Khan
Ali Hyder	Om Parkash
Altaf Alam	Qazi Masroor
Altaf Baqir	Riaz Awan
Altaf Shaikh	S. M. Munir
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HIGH-Q



PROGRAM  
AT A  
GLANCE



## PROGRAM AT A GLANCE

Time	Friday December 11	Saturday December 12	Sunday December 13
0900-1000	<b>Registration</b>	<b>Exhibition</b>	PSSLD Rising Star Forum (1 hour)
0945-1000	Opening		
1000-1030	<b>EUS in Hepatology</b> (2 hours)	Free Paper Presentations (2 hours)	From Liver Transplant to Personalized Patient Care (1.75 hours)
1030-1100			
1100-1130			
1130-1200			
1200-1230	Tips and tricks for impactful Research (1 hour)	ACLF (1 hour)	Autoimmune and Drug- induced Liver Diseases (1.25 hours)
1230-1300			
1300-1330	Prayers and Lunch	Prayers and Lunch	Prayers and Lunch
1330-1400			
1400-1430	Postgraduate Forum	Managing complications of Cirrhosis in 2020 (1.5 hours)	Liver Tumors (1.25 hours)
1430-1500			
1500-1530		Portal Hypertension and Vascular Diseases (1.5 hours)	Potpourri (2 hours)
1530-1600			
1600-1630	Quick Decisions in Hepatology: Clinical Vignettes (3.5 hours)	Break	Closing Ceremony
1630-1700			
1700-1730	Quiz Competition (1 hour)	HCV (1.5 hours)	
1730-1800			
1800-1830	Inauguration	HBV (1.5 hours)	
1830-1900			
1900-2000	Dinner	Insight into MAFLD in 2020 (1.5 hours)	
2000-2030			
2030-2100			
2100-2130			
2130-2200			
		Dinner	



SCIENTIFIC

SCIENTIFIC

PROGRAM

PROGRAM



# SCIENTIFIC PROGRAM

**DAY 1: FRIDAY, December 11, 2020**

## SYMPOSIUM I: EUS IN HEPATOLOGY

Chairs: Christopher Khor (Singapore), Nonthalee Pausawasdi (Thailand), Wasim Jafri (Pakistan)  
Moderator: Adeel Ur Rehman

1000-1020	EUS Anatomy of the Liver	Damien M.Y. Tan (Singapore)
1020-1040	EUS guided vascular interventions	Kenneth Binmoeller (USA)
1040-1100	Endo-hepatology: the new paradigm	Kenneth J. Chang (USA)
1100-1120	EUS-guided liver biopsy	Nonthalee Pausawasdi (Thailand)
1120-1150	Discussion	
1150-1200	Quiz	

## SYMPOSIUM II: TIPS AND TRICKS FOR IMPACTFUL RESEARCH

Chairs: Shahid Sarwar, Jameel Ahmed, Arif Amir Nawaz, Altaf Shaikh, Farhana Kayani  
Moderator: Ghulam Fareed

1200-1215	Mistakes in designing, conducting a study, and potential solutions	Asad Ali (Pakistan)
1215-1230	Make it publishable! From the selection of a journal to getting it published	Yasir Waheed (Pakistan)
1230-1245	National and international funding opportunities for research in Hepatology	Adeel Ajwad Butt (USA)
1245-1300	Discussion & Quiz	

### LUNCH

## SYMPOSIUM III (A): QUICK DECISIONS IN HEPATOLOGY: CLINICAL VIGNETTES

Chairs: Rustam Khan, Masroor Ahmed, Nadeem Tehami (UK), Abdul Qadir, Abdul Basit  
Moderator: Muhammad Kamran

1430-1445	A case of gastric variceal hemorrhage when endoscopic management fails	Faisal Wasim Ismail (Pakistan)
1445-1500	A case of acute liver failure due to Budd-Chiari Syndrome: From diagnosis to treatment	Arif Amir Nawaz (Pakistan)
1500-1515	A case of overlap syndrome (PBC/PSC with AIH)	Sadik Memon (Pakistan)
1515-1545	A patient with cirrhosis planned for laparotomy (Preop evaluation of patients with cirrhosis)	Yasir Abbas Zaidi (Pakistan)
1545-1600	A case of cirrhosis with tuberculosis	Amna Subhan Butt (Pakistan)
1600-1615	Quiz/Break	

## SYMPOSIUM III (B)

Chairs: Abdul Rauf Memon, Abrar Sheikh, Sher Rehman, Adil Naseer, Riaz Awan Moderator: Farina Hanif

1615-1630	A case of infections in post-liver transplant patients	Nasir Luck (Pakistan)
1630-1645	A case of Wilson's disease with associated neurological manifestation	Shahid Rasool (Pakistan)
1645-1700	A case of chronic hepatitis (HBV or HCV) in pregnancy	Lubna Kamani (Pakistan)
1700-1715	A patient with NAFLD and normal BMI	Farrukh Saeed (Pakistan)
1715-1730	A case of Sarcopenia and malnutrition in cirrhosis	Rustam Khan (Pakistan)
1730-1800	A recent liver transplant with Seventh-day syndrome	Fakhar Ali Qazi Arisar (Canada)
1800-1900	Quiz Competition	



**INAUGURATION**

- 1900-1905 Recitation from the Holy Quran (Video)  
 1905-1910 National Anthem (Video)  
**Addresses**  
 1910-1915 President PSSLD and the Chair Organizing Committee  
 1915-1920 Chair Scientific Committee  
 1920-1930 Chief Guest  
**Impact of COVID-19**  
 1930-1945 COVID-19 and liver involvement: Prof. Wasim Jafri  
 1945-2000 Challenges in the elimination of hepatitis in the COVID era: Prof. Saeed Hamid  
 2000 Vote of Thanks: Vice President PSSLD, Prof. Amjad Salamat

**DINNER****DAY 2: SATURDAY, December 12, 2020**

0900-1000 Poster Session

**SYMPOSIUM IV: FREE PAPER PRESENTATIONS**

Chairs: Yasir Waheed, Shahid Rasool, Lubna Kamani, Muhammad Kamran  
 Moderator: Mian Shah Yousaf

1000-1200 Free paper (12 presentations, 7 Minutes for Presentation and 3 Minutes for Question Answers)

**SYMPOSIUM V: MANAGING ACLF IN 2020**

Chairs: Saeed Hamid, Altaf Baqir, S. M. Munir, Arif Amir Nawaz, Farina Hanif, Nusrat Yar Khan  
 Moderator: Zahid Azam

- |           |                                |                          |
|-----------|--------------------------------|--------------------------|
| 1200-1215 | ACLF reversal and ACLF again?  | Yogesh Chawla (India)    |
| 1215-1230 | When to transplant in ACLF?    | Faisal Dar (Pakistan)    |
| 1230-1245 | New treatment options for ACLF | Shiv Kumar Sarin (India) |
| 1245-1300 | Discussion                     |                          |

**LUNCH****SYMPOSIUM VI: MANAGING COMPLICATIONS OF CIRRHOSIS IN 2020**

Chairs: Tassawar Hussain, Muhammad Salih, Bashir Sheikh, Bakht Biland, Junaid Saleem  
 Moderator: Farhana Kayani

- |           |   |                                 |
|-----------|---|---------------------------------|
| 1400-1415 | Current advances in the prevention and management of hepatorenal syndrome | Ghias Un Nabi Tayyab (Pakistan) |
| 1415-1430 | Antibiotics prophylaxis in cirrhosis: pros and cons                       | Necati Ormeci (Turkey)          |
| 1430-1445 | Beta-blocker in decompensated cirrhosis: Jury is still out                | Ibrahim Mostafa (Egypt)         |
| 1445-1500 | Managing portopulmonary hypertension and hepatopulmonary syndrome         | Amjad Salamat (Pakistan)        |
| 1500-1530 | Question Answers, Discussion  |                                 |

**SYMPOSIUM VII: PORTAL HYPERTENSION AND VASCULAR DISEASES**

Chairs: Masood Siddiq, Hasnain Ali Shah, Ghias-un-Nabi Tayyab, Farrukh Saeed, Saleh M. Channa  
 Moderator: Nazish Butt

- |           |  |                             |
|-----------|--|-----------------------------|
| 1530-1545 | Vascular targets for the improvement of Portal Hypertension                                  | Jordi Gracia-Sancho (Spain) |
| 1545-1600 | Post bleeding & Peri-procedural anticoagulation in cirrhosis: When to start and when to stop | Altaf Alam (Pakistan)       |
| 1600-1615 | Non-cirrhotic Portal Hypertension: Controversies in the Diagnosis and Management             | Anil Arora (India)          |
| 1615-1630 | Discussion   |                             |

**COFFEE BREAK**



**SYMPOSIUM VIII: HCV**

Chairs: Wasim Jafri, Sadik Memon, Adeel Butt, Sharbat Khan, Qazi Masroor  
 Moderator: Yasir Abbas Zaidi

1700-1715	Difficult to treat patients in the era of DAAs	Rajender Reddy (USA)
1715-1730	Treating co-infections • HBV and HCV coinfection with or without HDV • HCV-HIV coinfection	Saeed Hamid (Pakistan)
1730-1745	Treat or not to treat HCV: In patients with HCC or patients receiving chemotherapy for other cancers	Tawesak Tanwandee (Thailand)
1745-1800	Impact of DAAs on liver-related outcomes, all-cause mortality, and HCC incidence	Fasiha Kanwal (USA)
1800-1830	Question Answers, Discussion	

**SYMPOSIUM IX: HBV AND HDV**

Chairs: Zaigham Abbass, Bader Faiyaz Zuberi, Shanil Kadir, Samiullah Shaikh, Asad Chaudhry  
 Moderator: Faisal Wasim Ismail

1830-1845	Occult HBV infection: diagnosis and treatment if any?	Wasim Jafri (Pakistan)
1845-1900	To treat or not to treat HBV infection: immune tolerant and inactive carriers	Robert Gish (USA)
1900-1915	Treatment of Hepatitis D: Any ray of hope?	Mario Rizetto (Italy)
1915-1930	New biomarkers of chronic hepatitis B infection	Cihan Yurdaydin (Turkey)
1930-1945	Current and Future HBV Treatment	Anna Lok (USA)
1945-2015	Question Answers, Discussion	

**SYMPOSIUM X: NAFLD**

Chairs: Altaf Alam, Faisal Wasim Ismail, Amjad Salamat, Bikha Ram, Akif Dilshad  
 Moderator: Amna Subhan Butt

2015-2030	Redefining NAFLD to MAFLD: is the plausible?	Ajay Kumar Duseja (India)
2030-2045	Biopsy free NAFLD: Non-invasive versus histological modalities in diagnosis and assessing outcomes	Laurent Castera (France)
2045-2100	Evidence based approach to management of NASH without histological Assessment	Arun J. Sanyal (USA)
2100-2115	Gut-liver axis and microbiota in NAFLD: A link to emerging therapies	Jasmohan S. Bajaj (USA)
2115-2130	Current and future therapeutic landscape for NAFLD	Zobair M Younossi (USA)
2130-2200	Q & A, Discussion	

**DAY 3: SUNDAY, December 13, 2020****RISING STAR FORUM**

Chairs: Masood Siddiq, Altaf Baqir, Ali Hyder, Altaf Shaikh, Sadiq Achakzai Moderator: Mian Shah Yousaf

0900-0915	The Enigma of Autoimmune Hepatitis overlap syndrome	Mohammad Asim
0915-0930	Development of a Nomogram to predict the severity of hepatic fibrosis by non invasive markers and treatment allocation in NAFLD patients	Farhana Kayani
0930-0945	Acute on chronic liver failure: a life threatening medical problem with Geographical differences and global controversies	Ghulam Fareed

**SYMPOSIUM XI:  
FROM LIVER TRANSPLANT TO PERSONALIZED PATIENT CARE**

Chair: Faisal Dar, Abdul Wahab Dogar, Asif Baig, Shahid Karim, Abu Bakar Hafeez Bhatti Moderator: Atif Majeed

1000-1015	Liver transplant: The art of personalized immunosuppression	Bilal Hameed (USA)
1015-1030	Post-transplant challenges: dealing with the complications	Muhammad Arsalan Khan
1030-1045	Managing recurrence of primary etiologies after liver transplant	Khalid Mumtaz (USA)
1045-1115	State of the Art Lecture: Transplant or not to transplant: challenges in decision making	Mohamed Rela (India)
1115-1145	Q & A and Discussion	

## SYMPOSIUM XII: AUTOIMMUNE AND DRUG-INDUCED LIVER DISEASES

Chairs: Nauman Zakir, Kashif Malik, Shakeel Ahmed Mirza, Abdul Qayyum Memon, Om Parkash  
Moderator: Saadat Jaskani

1145-1200	Autoimmune hepatitis with and without cirrhosis: Current and future treatment	Motaz Fathy Saad (Kuwait)
1200-1215	PBC and PSC: Updates in diagnosis and management	Masood Siddiq (Pakistan)
1215-1230	IgG4-related diseases with HPB involvement: The art of dealing with a multifaceted disease	Nadeem Tehami (UK)
1230-1245	Drug-induced liver injury: Recent advances in diagnosis and treatment	Shahab Abid (Pakistan)
1245-1300	Q & A and Discussion	
1300-1400	Lunch	

## SYMPOSIUM XIII: LIVER TUMORS

Chairs: Shoaib Shafi, Sadik Memon, Karim Kammeruddin, Nazish Butt, Haseeb Haider Zia  
Moderator: Adil Naseer

1400-1415	The Changing Epidemiology and Prevention of HCC	Rosmawati Mohamed (Malaysia)
1415-1430	Biomarkers in HCC surveillance and diagnosis	Zaigham Abbas (Pakistan)
1430-1445	Immunotherapy in the management of HCC: A major step forward	Peter R. Galle (Germany)
1445-1500	Don' t mess with liver masses: Managing lesions other than HCC (ICC, adenoma, fibrolamellar variant of HCC)	Ashok Choudhury (India)
1500-1515	Q & A and Discussion	

## SYMPOSIUM XIV: POTPOURRI

Chairs: Ashfaq Ahmed, Nasir Luck, Abdullah Bin Khalid, Abdul Qadir, Zeeshan Ali  
Moderator: Muhammad Kamran

1515-1530	Hepatitis E: The menace beyond the liver	Sudhamshu K. C. (Nepal)
1530-1545	Climate Change: Implications for the liver Disease	Desmond Ladden (Canada)
1545-1600	Updates in the management of alcohol-associated liver disease	Dong-Joon KIM (Korea)
1600-1615	Managing cirrhosis and portal hypertension in pregnancy	Mohamed Alboraie (Egypt)
1615-1630	Vascular thrombosis in cirrhosis: When and how to manage with anticoagulation	Mohammad Salih (Pakistan)
1630-1645	Diet, exercise, and NAFLD: What do I tell my patients?	Ananta Sharesta (Nepal)
1645-1715	Q & A, Discussion	

## CLOSING CEREMONY

Moderator: Junaid Saleem

1715-1745	Best Oral Presentation Awards
	Best Poster Presentation Awards
	Quiz Winners
	PSSLD Rising Star Awards
	Closing Remarks



# QUIZ COMPETITION

Friday December 11, 2020 Time: 11:50 am - 12:00 pm PKT

## *Agha Khan University Hospital (Team Akuh)*



Marukh Ali



Wajid Iqbal

## *Jinnah Postgraduate Medical Centre (Team JPMC)*



Hanisha Khemani



Shayan Ali

## *Hayatabad Medical Complex (Team HMC)*



Wiqas Ahmad



Noor Ul Hakeem

## *Sindh Institute of Urology and Transplantation (Team SIUT)*



Raja Taha Yaseen Khan



Rani Tulsi

## *Liaquat National Hospital (Team LNH)*



Abdul Latif



Nazeer Ahmed

## *Dr. Ziauddin Hospital (Team Zmh)*



Shoukat Ali



Muhammad Ali Qadeer

## *Bolan Medical Complex Hospital (Team BMC)*



Muhammad Essa Khan



Yasir Iqbal



# PSSLD RISING STAR FORUM

Sunday, December 13, 2020 Time: 9:00 pm - 10:00 pm PKT

## RISING STARS



**Muhammad Asim**

The enigma of Autoimmune hepatitis Overlap Syndrome



**Farhana Kayani**

Development of a nomogram to predict the severity of hepatic fibrosis by non-invasive markers and treatment allocation in NAFLD patients



**Ghulam Fareed**

Acute on chronic liver failure: A life threatening medical problem with geographical differences and global controversies

## CHAIRS



**Masood Saddiq**



**Altaf Baqir**



**Ali Hyder**



**Altaf Shaikh**



**Sadiq Achakzai**

## Moderator



**Mian Shah Yousaf**

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EVENTS

EVENTS







**APASL**  
The Asia Pacific Association for the Study of Liver

**SINGLE TOPIC CONFERENCE - 2019**  
December 05-08, 2019 - Serena Hotel, Islamabad, Pakistan  
Organized by: Pakistan Society for the Study of Liver Diseases



His Excellency Dr. Arif Alvi (President of Islamic Jamhuria Pakistan), Prof. Wasim Jafri Patron of PSSLD, Prof. Zhongping Duan (Former President Chinese Society of Hepatology) and Prof. Masood Siddiq President of PSSLD addressing the Inaugural Session of 3rd APASL STC 2019 Islamabad

**Islamabad:** Pakistan Society for the Study of Liver Diseases (PSSLD) organized 3rd APASL Single Topic Conference, in collaboration with Chinese Society of Hepatology (CSH, CMA) at a local hotel in Islamabad on the theme of “Elimination of Viral Hepatitis. by 2030 - From Dream to Reality”. This was also the 13th Annual Meeting of PSSLD 2019.

The aim of this meeting was to bring together leading national researchers and practitioners to offer informative and thought provoking lectures, present research papers and exchange their knowledge so that information on prevention and care of Liver disease could be disseminated to the wider medical and health care community.

The organizing committee of 3rd APASL Single Topic Conference had chalked out four days of a very innovative and extensive scientific program to understand the latest trends of Liver diseases especially about public health aspect of hepatology, new guidelines for treatment of Hepatitis by oral agents, prevalence of hepatocellular carcinoma, new paradigms of International research and protocols for the treatment of liver diseases.

The best part of the conference was large number of International Speakers and Participant, Chinese delegation was led by Prof. Zhongping Duan, Former President of Chinese Society of Hepatology (CSH, CMA) and consisted of 15 eminent professors including President Elect Prof. Yuemin Nan, Prof. Shuang Liu and various experts of liver diseases, from all over China.



Prof. Mario Rizzetto and Prof. Saeed Hamid addressing the Q & A Session of Hepatitis Delta Seminar during Conference



Prof. Zaigham Abbas, Prof. Zhongping Duan, Prof. Yuemin Nan, Prof. Shuang Liu and Dr. Jiangaofan





Dr. Arif Alvi, Prof. Wasim Jafri, Prof. Zhongping Duan, Prof. Masood Siddiq, Prof. Amjad Salamat and Prof. Zaigham Abbas

Other faculty of the event came from across the globe included Prof. Mario Rizzetto from Italy (Founder of Hepatitis Delta Virus), Prof. Norah A. Terrault, Prof. Fasiha Kanwal and Dr. Bilal Hameed from USA, Prof. Gulnara Aghayeva (President of Azerbaijan Society of Hepatology) from Azerbaijan,

Prof. Imam Waked from Egypt, Prof. Syed Moayed Alavian from Iran, Prof. Abdul Kadir Dokmeci (Former President APASL) from Turkey and Prof. Necati Ormeci (Former President, Turkish Society of Gastroenterology) from Turkey, Prof. Salim-Ur-Rahman (Former President SAASL), Dr. Nadeem Tehami from UK and Dr. Ioan Ancuta from Romania. Four days of the event divided into multiple programs, on first day event started with Post Graduate

Research workshop and Case Based PG Workshop for Physicians, Post Graduate Students and Under Graduate students.

Second day of the event scheduled for Public Health Seminar followed by seminar on hepatology diseases in regional perspectives.

The inauguration ceremony of 3rd APASL Single Topic Conference was held on the 2nd day in the evening. The chief guest on the occasion was His Excellency Dr. Arif Alvi President Islamic Jamhuri Pakistan.

The Inaugural session was attended by people of different walks of life including physicians, transplant surgeons, gastroenterologists, hepatologists and internists including senior members of the medical community.



Group Photo: International and National Faculty of the 3rd APASL STC 2019 Islamabad during Gala Dinner





Prof. Mario Rizzetto (Italy)



Prof. Zhongping Duan (China)



Prof. Norah A. Terrault (USA)



Prof. Abdul Kadir Dokmeci (Turkey)



Prof. Imam Waked (Egypt)



Prof. Necati Ormeci (Turkey)



Dr. Li Chen (China)



Prof. Shuang Liu (China)

The chief guest on the occasion appreciated the work and efforts of society especially he valued Prof. Masood Siddiq and Prof. Wasim Jafri and their team, he said that the Society is doing great job in order to help physicians to understand the burden of Liver masses and suggesting measures to decrease the misery of patients. He said eight to ten percent segment of our population is patient of hepatitis.

The President regretted that majority of liver patients are unaware of their disease. He stressed on the need of prevention against all diseases and avoiding unnecessary use of injections and antibiotic.



Prof. Fasiha Kanwal (USA)



Dr. Gulnara Aghayeva (Azerbaijan)



Prof. Yuemín Nan (China)



Prof. Salimur Rahman (Bangladesh)



Prof. Sayed Moayed Alavian (Iran)



Dr. Bilal Hameed (USA)



Dr. Jiangaofan (China)



Prof. Nadeem Tehami (UK)

Appreciating Egypt for bringing down prevalence of hepatitis from thirty to three percent, he said Pakistan should follow the footsteps of countries that have successfully minimized the menace. He called for improving communication with people of the country to aware them about different diseases.

The President emphasized on mobilizing lady health workers to spread the message of health care and prevention. Prof. Wasim Jafri the Founding President of PSSLD in his address shared various aspects of Hepatology. Dr. Jafri appreciated the excellent presence of Chinese delegation and other International and National Faculty. He extended his personal gratitude to Prof Duan for his kind efforts in arranging this visit to Pakistan.

Earlier Prof. Masood Siddiq, President of PSSLD thanked the chief guest, international faculty, national faculty and the audience for their kind support and presence. He said that despite of new society in the international and national healthcare sector, PSSLD has achieved a reputation as an academic society of the country. This is our 3rd APASL STC organized by PSSLD.





(L-R) Dr. Mohammad Salih, Prof. Saeed Hamid, Prof. Muzaffar Latif Gill & Prof. Abrar Shaikh Chairing the Session



Prof. Masood Siddiq presenting shield to Hi-Q Pharma for Excellent Participation



Prof. Masood Siddiq presenting shield to Ferozsons Lab for Excellent Participation

Prof. Duan Zhongping, Former President of CSH pointed out the main objectives of the Society which puts close relations with liver specialists as its topmost priority, followed by continuous medical education so that experiences can be share with each other. He announced that Chinese Society of Hepatology will continue its ties with Pakistan Society for the Study of Liver Diseases (PSSLD) for future endeavors.

He said that Chinese delegation of doctors is very glad to be at their second home Pakistan. He said that friendship between China and Pakistan is based on trust and mutual support, we have brought our hearts and minds together. He thanked the organizers for their kind hospitality and appreciated the developing academic relationships between the two countries. The Inaugural session was followed by a free paper session.

The 3rd day of the event started with plenary sessions followed by musical evening in which several traditional instruments and artists performed on renowned cultural songs of different areas of country.

The 4th day started with free paper sessions followed by plenary sessions and conference closed on Post Graduate Case Based Workshops.



Group Photo: Dr. Arif Alvi (President of Islamic Jamhuria Pakistan) with International and National Faculty of the 3rd APASL STC 2019 Islamabad



## PSSLD Webinar on COVID-19: Liver and Gut

Pakistan Society for the Study of Liver Diseases (PSSLD) organized a webinar for Physicians, Hepatologists and Gastroenterologists to provide the latest information about the mode of spread and provide guidance on caring patients with liver diseases and liver transplant recipients



Prof. Wasim Jafri



Prof. Saeed Hamid



Prof. Zaigham Abbas



Dr. Amna Subhan



Prof. Zahid Azam

**Karachi:** Coronavirus Disease 2019 (COVID-19) is mainly spread from person to person through people who are in close contact with one another. It primarily involves the respiratory tract and may cause pneumonia and severe respiratory stress syndrome (SARS). It is now being recognized that some of these patients have gastrointestinal symptoms and disturbed liver function tests. In response to the COVID pandemic, Pakistan Society for the Study of Liver Diseases (PSSLD) organized a webinar on 19th April for physicians, hepatologists, and gastroenterologists to provide the latest information about the mode of spread and provide guidance on caring patients with liver diseases and liver transplant recipients. The webinar was moderated by Prof. Zahid Azam

Prof. Wasim Jafri presented an overview of the COVID-19. The infection started from Sea Food Market of Wuhan China in December 2019. The route of transmission is mainly respiratory droplets. The close contacts and asymptomatic infected people can also be a source of infection. There is the possibility of aerosol transmission in a relatively closed environment for a long-time exposure to high concentrations of aerosol. The novel coronavirus can also be isolated in feces of the infected population. Suspected and confirmed cases should be isolated and treated at designated hospitals with effective isolation, protection, and prevention conditions in place. Critical illness cases should be admitted to ICU as soon as possible. Prof. Jafri discussed the treatment of severe and critical cases, respiratory support, circulatory support, and renal replacement therapy. Different drugs are being tried including hydroxychloroquine, azithromycin, remdesivir, tocilizumab, and convalescent plasma treatment, he added.

Prof. Saeed Hamid addressed the involvement of the liver and digestive tract in COVID. 'COVID-19 infection can also present primarily with GI symptoms, well before respiratory symptoms develop. 'So be aware', he added. COVID-19 can have prolonged shedding in the stool of the recovered patients. ACE 2 is the functional receptor for COV-19. This is present in the biliary (20 times higher) and liver epithelial cells. Elevated liver biochemistries may reflect a direct virus-induced cytopathic effect and/or immune damage from the provoked inflammatory response. Liver biopsies show moderate microvascular steatosis and mild lobular and portal activity, but do not show significant damage in hepatocytes or bile duct cells. ACE2 is also highly expressed in the esophagus and stratified epithelial cells, and absorptive enterocytes from ileum and colon. Liver damage may be the result of direct hepatocyte damage or immune-mediated damage as part of a multi-organ involvement "Cytokine Storm" or as a result of drug toxicity.

Prof. Zaigham Abbas gave a presentation on the guidance for the liver patients in the era of COVID-19 pandemic. His advice to patients included: avoid crowded places, visitors, parties, interest group meetings, shopping malls, and bazaars. Delay and reschedule your clinic visit if not urgent. Avoid elective hospital visits. Be very careful if you have co-morbid like diabetes and hypertension. Eat a balanced diet -take vitamin supplements if the appetite is poor. Monitor blood pressure, heart rate, and urine volume, if you are on some drugs to reduce your extra body water (diuretics) or to prevent blood vomiting (beta-blockers). Take medications on time, including any drugs for viral or autoimmune hepatitis, blood pressure or diabetes, etc. Reschedule elective endoscopic procedures (band ligation). If you are not feeling well, contact your doctor on WhatsApp, by email or contact the helpline of your hospital. Visit hospital for urgent issues only like blood vomiting, ascites, drowsiness, low urinary output, worsening jaundice, intractable vomiting. Get tested for COVID-19 if you get a cough, fever, shortness of breath, or diarrhea. Prof. Zaigham stressed that patients of liver transplant and autoimmune hepatitis who were not suffering from COVID should not reduce or stop immunosuppression and patients with liver cancer should not delay their treatment. If the patient had already received treatment follow-up surveillance CT might be delayed (arbitrarily up to 2 months). In the case of COVID-19, early admission recommended

Dr. Amna Subhan threw light on the precautions to be observed while performing endoscopy. She stressed the need of triage and screening patients by trained medical personnel and to restrict GI procedures, postponing non-urgent or elective cases. She discussed different kinds of personal protection equipment (PPE) needed during endoscopy and proper donning and doffing of PPE in detail. She stressed the need of effective infection control and measures to prevent iatrogenic disease transmission and protect both health care providers and patients.

The meeting ended with a Q&A session coordinated by Prof. Zahid Azam.





Prof. Wasim Jafri



Prof. Saeed Hamid



Prof. Eamonn Quigley



Prof. Jasmohan Bajaj



Prof. Zaigham Abbas



Prof. Masood Siddiq

## PSSLD Webinar on 'The Gut-Liver Axis'

Pakistan Society for the Study of Liver Diseases (PSSLD) Organized a webinar in Collaboration with WGO to Commemorate WDHD 2020

Pakistan Society for the Study of Liver Diseases (PSSLD) organized a webinar on 30th May in collaboration with WGO to commemorate WDHD 2020. The title of the webinar was "The Gut Liver Axis". Prof. Saeed Hamid, from Aga Khan University Hospital, Karachi, Pakistan who is also Chair, Hepatology Interest Group WGO, moderated the Webinar.

He mentioned Prof. Zaigham Abbas from the Ziauddin University Karachi and current President of PSSLD gave the first presentation on the 'The Gut Microbiome and the Gut Liver Axis'. Several factors affect the development and alteration of the gut microbiome including birthing and infant feeding method, exposure to physical metabolic and psychological stress, environment, diet, medications, and stage of the lifecycle, and comorbid diseases.

The interaction of gut with the host is mostly indirect and is mediated by their metabolic products, also called postbiotics, "The Gut-Liver Axis is a bidirectional relationship between the gut microbiota and the liver. This reciprocal interaction is established by the portal vein which transports gut-derived products directly to the liver and the liver feedback route of bile and antibody secretion to the intestine", Dr. Abbas added Prof. Wasim Jafri, from Aga Khan University and Director WGO Karachi Training Center Introduced the next key speaker, Prof. Eamonn Quigley. Prof. Quigley is Co-Chair, WDHD 2020 Campaign. He spoke on 'Gut Microbiome and Liver Disease'.

He mentioned vascular, lymphatic, and liver firewalls that captures gut bacteria entering the blood stream. He threw light on the role of gut microbiota in chronic liver disease, hepatic encephalopathy, acute liver injury, hepatocellular carcinoma, primary sclerosing cholangitis, and non-alcoholic and alcoholic fatty liver disease. Professor Masood Siddiq, Past President PSSLD introduced the next speaker, Prof. Jasmohan Bajaj.

He is a member of the WDHD 2020 Steering Committee. He discussed 'Therapies Targeting the Gut-Liver Axis'. He concluded that microbiota can be managed in several ways to benefit liver disease. This online seminar was well attended by participants from different parts of the world.





**Prof. Wasim Jafri**  
*Founding President, PSSLD,  
 Professor of Medicine &  
 Consultant Gastroenterologist,  
 Aga Khan University,*



**Prof. Saeed Hamid**  
*Professor of Medicine &  
 Consultant Gastroenterologist,  
 Director, Clinical Trials Unit, Aga  
 Khan University, Karachi*



**Prof. Masood Siddiq**  
*Professor and Head, Department  
 of Medicine Jinnah Memorial  
 Hospital, Rawalpindi*



**Prof. Zaigham Abbas**  
*Professor and Head, Department  
 of Gastroenterology, Dr. Ziauddin  
 University Hospital Clifton  
 Karachi, President, PSSLD*



**Prof. Sharbat Khan**  
*Head, Department of  
 Gastroenterology,  
 Bolan Medical College &  
 Hospital, Quetta*

**Karachi:** More than 15 million people in Pakistan live with hepatitis B or C, according to experts, with the overwhelming majority unaware about how the viral infection can be prevented, treated and, in the case of Hepatitis C, cured.

“This is a global trend with nearly 90% of the 325 million people worldwide who live with the virus unaware that they have hepatitis,” Prof Zaigham Abbas, who heads the department of gastroenterology at Karachi’s Ziauddin University Hospital, said.

He said this while moderating a first-of-its-kind webinar organised by the Express Media Group and the Pakistan Society for the Study of Liver Diseases (PSSLD) with the support of Hilton Pharma and Hinucon, ahead of World Hepatitis Day, observed annually on July 28.

“The prevalence of hepatitis B in Pakistan is around 5%, while that of hepatitis C is 2.5%,” Prof Abbas said. “But the average is much higher in areas of upper Sindh, lower Punjab and some districts of Balochistan.”

Talking about numbers, he said that at least 20% of those with the infection, suffered from cirrhosis, or damage of the liver. The mortality rate is around 4%, which means around 120,000 Pakistanis die of the virus every year. “This means 325 people die in Pakistan everyday due to complications caused by hepatitis, a much higher fatality rate than Covid-19,” he added.

The World Health Organization (WHO) has set a target of eliminating hepatitis B and C as a public threat by 2030 by 90% reduction in new chronic infections, 65% reduction in mortality compared with a scenario in which interventions would continue at the current level.

Dr Bashir Ahmed, who heads the department of medicine at Shaheed Mohatarma Benazir Bhutto Medical University, Larkana, talked about the threat of transmission posed by the infection. “It is transmitted from infected mother to child, transfusion of infected blood, using syringes or surgical equipment previously used by a hepatitis positive patient, by having multiple sexual partners, etc.”

About diagnosis, Dr Shahid Rasool, who heads the department of gastroenterology and hepatology at Madina Teaching Hospital, Faisalabad, said that the lack of awareness has resulted in the disease being labelled a ‘silent killer’.

Prof Adil Naseer Khan of Ayub Medical College & Hospital, Abbottabad, talked about the treatment of hepatitis B, while Professor Sharbat Khan Mandokhail spoke about treatment of hepatitis C.

Dr Mohammad Salih, a consultant hepatologist at Islamabad’s Quaid-e-Azam International Hospital, spoke about medical complications caused by hepatitis and how they are treated.



**World Hepatitis Alliance** Undiagnosed, hepatitis can be deadly  
**Get tested**  
 # Find The Missing Millions. **ELIMINATE HEPATITIS**  
 NOhep



**Prof. Bashir Ahmed**  
 Professor & Head, Department of Medicine, Shaheed Mohtarma Benazir Bhutto Medical University, Larkana



**Dr. Shahid Rasool**  
 Associate Prof of Medicine, Head, Department of Gastro. & Hepatology, UMD, Madina Teaching Hospital, Faisalabad



**Prof. Adil Naseer**  
 Head, Department of Gastroenterology, Ayub Medical College & Hospital, Abbottabad



**Dr. Mohammad Salih**  
 Director Hepatology and Consultant Hepatologist, Quaid-e-Azam International Hospital, Islamabad



**Dr. Amna Subhan**  
 Consultant Gastroenterologist Department of Medicine The Aga Khan University, Karachi

Prof Masood Siddiq, the head of the department of medicine at Jinnah Memorial Hospital, Rawalpindi, spoke about how screening can be carried out to identify the millions who have the virus but are yet to be diagnosed.

Dr Amna Subhan, a consultant gastroenterologist at the Aga Khan University (AKU) Hospital, Karachi, spoke about vaccination for the various types of hepatitis, how they are spread. "There is no vaccine for hepatitis C and D," she said, but added that hepatitis B vaccine is widely successful and should be administered to all those who haven't been infected.

Prof Saeed Hamid, who heads the clinical trials unit at the AKU, spoke about programmes for the elimination of the viral infection. Citing the example of Egypt, he said the country has brought down prevalence from 8% to less than 1% now. "We need commitment and concerted action from the government instead of patchy responses," he added.

Prof Hamid, a former president of PSSLD, also questioned the country's capacity to diagnose and treat hepatitis. "As per WHO's goals, we have to screen 140 million people, of which we expect to identify 8 million who need treatment. Do we have the wherewithal to do this over the next ten years?"

He added that Covid-19 had further complicated the situation and the programme for mass screening was likely to be delayed further.

Prof Wasim Jafri, the founding president of PSSLD who is also a consultant gastroenterologist at South City Hospital and AKU, spoke about the effect of Covid-19 on hepatitis control.

Speaking about whether Covid-19 would be an impediment in controlling hepatitis, he remarked: "Pakistan is one of those unfortunate countries that has failed to eradicate polio, what to say about Covid-19."

He said that Pakistan's inadequate healthcare system was already over-stretched due to pandemic but there was a need to identify hepatitis hot spots and map the prevalence of the infection in various parts of the country. He also urged the media to play their role in creating awareness about the disease while lauding the Express Media Group for its initiative.

"The menace of the novel coronavirus hopefully, God willing, will come down but this menace of hepatitis is not going to go anywhere for the foreseeable future," he said.

The webinar, which was broadcast live on social media, also included questions from viewers, which the speakers answered following their presentations.





# WORLD HEPATITIS DAY 2020



Do not let COVID-19 undermine hepatitis elimination efforts



**Dr. Saleh Channa**  
Head Department of  
Gastroenterology & Medical  
unit 2, GMMHC Sukkur



**Dr. Altaf Baqir**  
Consultant Gastroenterologist  
Asad Nursery, Multan



**Dr. Qazi Masroor Ahmed**  
Professor of Medicine  
Quaid-e-Azam Medical College &  
Bahawal Victoria Hospital, Bahawalpur



**Dr. Amjad Salamat**  
Consultant Gastro/Hepatologist  
Quaid-e-Azam International  
Hospital, Islamabad



**Dr. Faisal Waseem**  
Consultant Gastroenterologist  
Department of Medicine  
AKU, Karachi

## Play Your Role in the Elimination of Hepatitis

Pakistan Society for the Study of Liver Diseases (PSSLD) Organized a Webinar in Collaboration with WHA & NoHep to Commemorate WHD 2020

Pakistan Society for the Study of Liver Diseases organized a webinar on "Play your Role in the Elimination of Hepatitis" to commemorate World Hepatitis Day 2020. The seminar was organized by zoom network due to COVID-19 SOPs.

The moderator of the webinar was Dr. Faisal Wasim, Consultant Gastroenterologist, Department of Medicine, Aga Khan University, Karachi. He briefly introduced about the occasion of World Hepatitis Day in the background of efficient role of family physicians and health care personnel in the elimination of hepatitis from the society. He thanked all the speakers and audience for their kind presence.

First speaker of the seminar was Dr. Saleh Channa, Professor and Head, Department of Gastroenterology & Medical Unit 2, Ghulam Muhammad Mahar Medical College Sukkur, his topic was 'Role of Primary Care Physician in the Elimination of Hepatitis'. He scholastically informed that unfortunately Pakistan is the second largest country of the world after China carrying large burden of Hepatitis C. He said Primary Health Physicians are the backbone of health care system therefore it is recommended that they should be train and educated about prevalence, transmission, prevention & vaccination of hepatitis, because large number of population is directly connected with them on day to day basis and they can easily disseminate information among society.

The second speaker of the webinar was Dr. Altaf Baqir Naqvi, Consultant Gastroenterologist of Multan, his topic of presentation was 'Role of Hepatologist in the Elimination of Hepatitis'. He said that hepatitis elimination is a combined effort of primary physician, hepatologist, infection control personnel, government authorities, NGOs, and societies. Hepatologist has a key role to play in keeping viral hepatitis on the health agenda, hepatologist is most of time busy in treating cases of hepatitis and try to overcome misery and complications of this lethal disease. I think Hepatologist can be raising his voice by advocacy on different forums of medical societies to create not only awareness about the disease but also for the prioritization of viral hepatitis. The target of WHO is the reduction of 90% hepatitis by 2030 is achievable only with the help of all health care workers.

The next speaker of the webinar was Dr. Qazi Masroor, Former Professor of Medicine, Quaid-e-Azam Medical College & Bahawal Victoria Hospital, Bahawalpur, his topic was 'Role of Infection Control personnel' in the elimination of hepatitis. He said that the burden of general infections is on developing countries and there is great need of trained infection control doctors, nurses, and health care workers in every health facility of the country. Infection control people focused on surveillance of infections like hepatitis, so they keenly informed us by doing screening of the patients and also trained other health care workers for reducing transmission of infection. The viral hepatitis transmission minimized by adopting the infection control programs.

The last speaker of the webinar was Dr. Amjad Salamat, Consultant Gastro/Hepatologist, Quaid-e-Azam International Hospital Islamabad, his topic of presentation was 'Role of NGOs and Societies' for the elimination of hepatitis. It is generally assumed that NGOs and societies are managed by intellectuals and high level professionals of the said sectors, therefore it is prime responsibility of societies to design guidelines about the elimination of hepatitis and should provide proposals for the government and decision makers to put their resources for most important and critical issues like, elimination of hepatitis.

The webinar is broadcast live on social media, also included questions from viewers, which the speakers answered following their presentations.



**Pakistan Society for the Study of Liver Diseases (PSSLD) Organized  
a Webinar in Collaboration with International Speakers  
IgG4 Related Disease - The Elusive Autoimmune Disorder**



**Dr. Nadeem Tehami**  
*University Hospital Southampton  
NHS Foundation Trust, UK*



**Dr. John Leeds**  
*The Newcastle upon Tyne Hospital  
NHS Foundation Trust, UK*



**Prof. Zaigham Abbas**  
*President PSSLD, Pakistan*



**Dr. Romy Chamoun**  
*Lankenau Medical centre,  
Philadelphia, USA*

Karachi: IgG4-related disease (IgG-RD) describes a group of fibro-inflammatory diseases that affect a variety of tissues resulting in tumor-like effect and/or organ dysfunction. 'Clinical presentation varies according to the tissue(s) involved, and diagnosis relies on tissue findings of dense infiltration of IgG4-positive plasma cells and a characteristic storiform fibrosis' it is stated at Digital Seminar by Chair of the seminar Prof. Zaigham Abbas, President, Pakistan Society for the Study of Liver Diseases (PSSLD) and Head, the department of hepato-gastroenterology, Ziauddin University Hospital, Clifton Karachi.

Pakistan Society for the Study of Liver Diseases (PSSLD) arranged the webinar for Gastroenterologist, Hepatologist, General Practitioners, Family Physicians and for Post Graduate Students.

The Speakers of the webinar were Dr. Katarzyna M. Pawlak, Department of Gastroenterology, Hospital of Ministry of Interior, Szczecin, Poland, she presented on 'Case Vignette & an Overview of the Guidelines'.

The second speaker was Dr. Nadeem Tehami, University Hospital Southampton NHS Foundation Trust, UK, he presented on 'HPB Cluster of IgG4-RD'.

The last speaker Dr. Tossapol Kerdsirichairat, Geisinger Medical Centre Danville, USA, he presented on Endoscopic Management of 'Autoimmune Pancreatitis & Cholangiopathy'.

Expert Panelists were Dr. Muhammad K Hasan, Director Advanced Endoscopy Fellowship, CIE Advent Health, Orlando, Florida, USA. Dr. John Leeds, The Newcastle upon Tyne Hospital NHS Foundation Trust, UK and Dr. Dalbir Sandhu, Cleveland Clinic, Ohio, USA. The Moderator of the webinar was Dr. Romy Chamoun, Lankenau Medical Centre, Philadelphia USA.

Experts discussed that, IgG 4 related disease (IgG4-RD) is a systemic fibro inflammatory disease characterized by dense infiltration of IgG4-positive plasma cells in the affected tissue(s) with or without elevated plasma levels of IgG4. The inflammatory infiltration along with a characteristic storiform fibrosis can lead to the development of chronic damage and/or tumefactive lesions that may affect any organ. In 2001, Hamano and colleagues published a study that showed the association between elevated plasma IgG4 levels and sclerosing pancreatitis, which is now called type 1 autoimmune pancreatitis (AIP). Immunohistochemical examinations of AIP tissues revealed severe infiltration with IgG4-positive plasma cells that further enlightened the existence of an IgG4-RD with a possible systemic process. In the years to follow, several previously described syndromes were linked to IgG4 infiltration and now they are labeled as IgG4-RD affecting different tissues or organs. These syndromes include Mikulicz disease, chronic sclerosing sialadenitis (Kuttner's tumor), Riedel's thyroiditis, mediastinal fibrosis, retroperitoneal fibrosis (Ormond's disease), periaortitis, idiopathic hypocomplementemic tubulointerstitial nephritis, multifocal fibrosclerosis, and inflammatory pseudotumor.





**Dr. Katarzyna M Pawlak**  
Department of Gastroenterology  
Hospital of Ministry of Interior,  
Szczecin, Poland



**Dr. Tossapol Kerdsirichairat**  
Geisinger Medical Centre  
Danville, USA



**Dr. Dalbir Sandhu**  
Cleveland Clinic,  
Ohio, USA



**Dr. Muhammad K Hasan**  
Director Advanced Endoscopy  
Fellowship, CIE Adveni Health,  
Orlando, Florida, USA

Experts discussed that, the symptoms of IgG4-RD vary considerably depending on the organ(s) or tissues involved. The most common presentation is a mass lesion or organ enlargement. The most commonly affected organs are salivary and lacrimal glands, pancreas and biliary tract, and the kidneys; but any organ could be involved and multiorgan disease can be also seen. The inflammatory infiltration and fibrosis can result in tissue or organ dysfunction in addition to tumor-like effects that can cause obstruction or compression complications. Among the clinical features observed are exophthalmos including orbital pseudotumor, salivary gland enlargement, pancreatic failure, lymph node enlargement, retroperitoneal fibrosis, kidney disease with proteinuria and subsequent renal failure, and aortitis-related aortic aneurysm. A number of cases will present as an incidental finding on imaging. Presentation is usually subacute, and some patients might have more than one organ affected at the same time or years after the initial diagnosis. Many patients have an existing allergic condition.

The diagnosis of IgG4-RD can be challenging and the approach to diagnosis will depend on the site affected. A thorough process should always be followed to rule out the different diseases that can mimic IgG4-RD. These diseases include a broad spectrum of conditions including malignancy, lymphoproliferative disorders, Antineutrophil cytoplasmic antibodies (ANCA)-associated vasculitis, sarcoidosis, Sjogren's syndrome, Castleman's disease and others.<sup>16, 17</sup>

Experts discussed that, it is important to remember that elevated plasma IgG4 levels are neither specific nor sensitive for IgG4-RD. Normal IgG4 can be seen in nearly one-fourth of the cases, and using a cutoff level for IgG4 of 135 mg/dl has a positive predictive value for IGG4-RD of only 34%.<sup>18</sup> While tissue biopsy is very helpful in ruling out cancer and other possible disease processes, IgG4+ cellular staining on biopsy alone is not sufficient to make a definite diagnosis of IgG4-RD as the presence of IGG4+ plasma cells in the tissue can be seen in other diseases including malignancy. In addition, certain sites affected by IgG4-RD, like the retroperitoneum, orbital cavity and pancreas, are very difficult to biopsy. Elevated numbers of circulating plasmablasts can be seen in a variety of inflammatory conditions but a significant elevation (>2,000 cells/ml) was observed in IgG4- RD and may serve as a marker for both diagnosis and measurement of disease activity. Plasmablasts elevation in IgG4-RD was seen even in patients who had normal IgG4 levels. However, the testing of plasmablasts might not be readily available in all clinical settings and more studies are needed to advise a universal use of this test. Comprehensive diagnostic criteria for IgG4-RD and organ-specific IgG4-RD (like AIP and IgG4-related kidney disease) exist and they take in consideration the clinical, serological, radiographic and histopathologic al manifestations. However, some of the proposed criteria had low sensitivity (as low as 70%). Also, a major caveat was the ability to make IgG4-RD diagnosis without obtaining a biopsy, which can be problematic. The use of these criteria should not replace the need for obtaining a biopsy from the suspected lesion.

Experts discussed that, the assessment should start with complete history and physical examination. Then when the disease is suspected lab testing and appropriate radiology evaluation will depend on the site involved. Plasma IgG4 levels should be obtained in all patients. Most cases of renal IgG4-RD will have low complements<sup>17</sup>, which often correlates with disease activity, thus complement levels should be obtained when renal IgG4-RD is suspected. Circulating plasmablasts measurement, if available, can be helpful especially if the serum IgG4 level is normal. Selection of the imaging modality in the assessment of IgG4-RD will depend on the organ under evaluation, local radiology expertise, and availability. Computed tomography (CT), CT with positron emission tomography (CT-PET), magnetic resonance imaging (MRI), magnetic resonance cholangiopancreatography (MRCP), Endoscopic retrograde cholangiopancreatography (ERCP), and endoscopic ultrasound (EUS) are modalities that are commonly used to evaluate IgG4-RD. Biopsy remains the cornerstone step in evaluation. As noted, the presence of high level of IgG4+ plasma cells (> 10/HPF or IgG4+/IgG4>40%) is typical but not diagnostic. Findings of storiform fibrosis and obliterative phlebitis increase the specificity of the diagnosis. Diagnosing biliary or pancreatic IgG4- RD is even more challenging due to difficulties in obtaining adequate tissue samples. The characteristic imaging findings and serologic testing become the main diagnostic criteria. Fine needle aspiration of the pancreas and brush cytology of the biliary system, however, remain important to rule out malignancy. The diagnosis is made by clinical correlation of the laboratory, imaging and histopathologic findings in absence of malignancy or other disease processes.





# Pakistan Society for the Study of Liver Diseases

## Weekly PSSLD Journal Club

Saturday, 2nd May, 2020



**Dr. Mian Shah Yousaf**  
Senior Registrar Department of Gastroenterology Peshawar Medical College, Peshawar  
**Topic: Positive Hepatitis B Core Antibody Is Associated With Cirrhosis and Hepatocellular Carcinoma In Nonalcoholic Fatty Liver Disease**

Saturday, 9th May, 2020,



**Dr. M. Akram**  
Assistant Professor Multan Medical College, Multan  
**Topic: What is new in Fatty Liver Disease "Say MAFLD; Not NAFLD"**

Saturday, 16th May, 2020



**Dr. Ghulam Fareed**  
Instructor, Department of Gastroenterology AKU Hospital, Karachi  
**Topic: A nomogram based on liver stiffness predicts postoperative complications in patients with hepatocellular carcinoma**

Saturday, 13th June, 2020



**Dr. Keith Siau**  
Trainee Editor, United European Gastroenterology Journal. Fellow, Gastroenterology & Hepatology Queen Elizabeth Hospital Birmingham, UK.  
**Topic: Nonvariceal upper GI hemorrhage after percutaneous coronary intervention for acute myocardial infarction: a national analysis over 11 months**

Saturday, 20th June, 2020



**Dr. Kamran Ala**  
Senior Registrar, Gastroenterology University Hospital Southampton, UK  
**Topic: Optimal stent placement strategy for malignant hilar biliary obstruction: a large multicenter parallel study**

Saturday, 4th July, 2020



**Dr. Syed Ahsan Ali Darbari**  
Registrar, National Institute of Liver and G.I. Disorders Dow University of Health Sciences, Karachi  
**Topic: Rebleeding and mortality risk are increased by ACLF but reduced by pre-emptive TIPS**

Saturday, 11th July, 2020



**Dr. Michael P. Johnston**  
Registrar, Department of Gastroenterology Glasgow Royal Infirmary, Glasgow  
**Topic: Randomised clinical trial: standard of care versus early transjugular intrahepatic portosystemic shunt (TIPSS) in patients with cirrhosis and oesophageal variceal bleeding**

Saturday, 15th August, 2020



**Dr. Jalpa Devi**  
Liaquat University of Medical and Health Sciences, Jamshoro/ Hyderabad  
**Topic: NGM28 2 Improves Liver fiber and Histology in 12 Weeks in Patients with Nonalcoholic Steatopatitis**

Saturday, 24th October, 2020



**Dr. Mohsen Subhani**  
Hepatology PhD Fellow Queen's Medical Center, Nottingham Digestive Diseases Biomedical Research Centre (NDDC) School of Medicine, University of Nottingham, UK  
**Topic: Thromboelastography-Guided Blood Component Use in Patients With Cirrhosis With Nonvariceal Bleeding: A Randomized Controlled Trial**

Saturday, 12th September, 2020



**Dr. Prince Misri Khan**  
Department of Medicine Chandka Medical College & Hospital SMBBMU, Larkana  
**Topic: Physical activity compared to adiposity and risk of liver related mortality: Results from two prospective, nationwide cohorts**



Zoom Meeting: 296 088 5898



Facebook: pssld.com.pk

FOR INFORMATION

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# Pakistan Society for the Study of Liver Diseases

## Weekly PSSLD Club Clinical Vignettes

Saturday, 17th October, 2020



**Dr. Hassan Liaquat Memon**  
Consultant Gastroenterologist  
and Hepatologist Dow University of  
Health Sciences, Karachi

**Topic: Clinical Vignettes Jaundice:  
A Variable Presentation**

Saturday, 21st November, 2020



**Dr. Rajesh Bansari**  
Consultant Gastroenterologist  
and Hepatologist Aga Khan  
University Hospital, Karachi

**Topic: Cases with Common  
Presentation but Uncommon  
Findings**

Saturday, 19th September, 2020



**Dr M. Atif Majeed**  
Assistant Professor NILGID,  
Dow University of Health Sciences,  
Karachi

**Topics: Cases with Deranged  
LFTs**

Saturday, 22th August, 2020



**Dr. Hafiz Abdul Basit**  
Senior Registrar Department of  
Gastroenterology, Fazaia Ruth Pfau  
Medical College, Karachi, Pakistan

**Topics: 1. Unusual cause of paraparesis  
2. A case of late liver allograft  
dysfunction**



Zoom Meeting: 296 088 5898



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-  Persons without clinical evidence of cirrhosis (or based on APRI\*\* score  $\leq 2$  in adults);
-  and who can be followed carefully long term for reactivation;
-  and if there is evidence of HBeAg loss and seroconversion to anti-HBe (in persons initially HBeAg positive) and after completion of at least one additional year of treatment;
-  and in association with persistently normal ALT levels and persistently undetectable HBV DNA levels (where HBV DNA testing is available).

\* World Health Organization, Guidelines for the Prevention, Care and Treatment of Persons with Chronic Hepatitis B Infection, March 2015.  
\*\* AST Platelet Ratio Index



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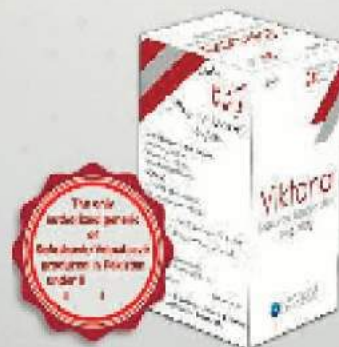
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## 1. Tuberculosis in cirrhotics, a prospective study from Bolan medical college, Quetta, Pakistan

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**Background:** Tuberculosis (TB) is a global disease; about one-third of the world's population is infected with Mycobacterium TB. Immunosuppressive states like cirrhosis of the liver can lead to a higher prevalence of TB than in the general population. Treatment of TB in an immunocompromised set up is challenging.

**Materials and Methods:** After ethical approval, a prospective observational study was conducted including 100 patients. Diagnosis of cirrhosis of the liver (medical records and imaging) and TB (imaging and AFB testing) were made as per standard protocols. Tubercular ascites in the setting of cirrhosis was diagnosed when high serum albumin ascites gradient, high protein ascites was present with a lymphocytic predominant high cell count fluid in the absence of an alternate diagnosis. Any of the findings of high adenosine deaminase levels more than 33 U/L in ascitic fluid, detection of AFB or positive M.TB culture in body fluid was taken as a confirmatory test for diagnosis of tubercular ascites. Pyrazinamide was completely avoided and a 9 months 3 drug regime (rifampicin, isoniazid, and ethambutol) was used. The outcome of the treatment was noted, and all the data were analyzed using Statistical Package for the Social Sciences (SPSS). Statistical significance was assumed at  $P < 0.05$ .

**Results:** In this study, the prevalence of TB was found in 10% of cirrhotic patients. Out of 79 male cirrhotics, 6 patients (3 had the extrapulmonary disease) had TB (5.1%). Sex distribution was not statistically significant (odds ratio: 3.13; 95% confidence interval [CI]: 0.41-20.02). Among all cirrhotics, extrapulmonary cases (5%) out-numbered pulmonary cases (2%), but the difference was not statistically significant. In the majority of cirrhotics, etiology was hepatitis C (66%) followed by chronic hepatitis B infection (27%). The most common complication seen in cirrhosis was sepsis. In overall cirrhotic patients, 60% were in Child' B (8-10). In this study, mortality was 13%.

**Conclusions:** (1) Prevalence of TB in cirrhotic patients was found to be 10%, (2) most common etiology of cirrhosis was Hepatitis C. (3) Extrapulmonary TB cases outnumbered the pulmonary TB cases in the present study



## 2. Treatment Outcomes Of Sofosbuvir And Velpatasvir In Chronic Hepatitis C Patients Undergoing Hemodialysis

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**Background:** Hepatitis C virus infection (HCV) is highly prevalent in patients with chronic kidney disease (CKD). The advent of direct-acting antiviral agents has revolutionized the therapy of HCV, including patients with advanced CKD. Limited data are available regarding HCV treatment efficacy with sofosbuvir (SOF) and velpatasvir (VEL) in end-stage renal disease (ESRD), especially for patients on dialysis in South Asia.

**Objective:** To determine the treatment outcomes Of SOF 400 mg And VEL 100 mg in Chronic Hepatitis C Patients Undergoing Hemodialysis.

**Materials and methods:** We enrolled 78 CKD patients at the Department of Gastroenterology and Nephrology, Jinnah Postgraduate Medical Centre, Karachi, Pakistan, All patients were = 16 years old diagnosed cases of CKD (stage V) on maintenance hemodialysis. Evaluation of HCV infection by polymerase chain reaction (PCR) HCV(RNA) qualitative was performed. All patients have treated with a combination pill of SOF 400 mg and Velpatasvir 100 mg once daily taken per oral for 12 weeks. All laboratory values were repeated at 12 and 24 weeks to assess the efficacy and side effects of therapy.

**Results:** Twenty-eight patients, 20 (70.0%) were male while 8(30.0%) were female with a mean age of  $40.84 \pm 10.52$  years. Baseline investigations were Creatinine  $7.5 \pm 3.75$ , urea  $125. \pm 36.5$ , serum potassium  $4.5 \pm 0.82$ , s.albumin  $3.35 \pm 0.62$ , Alanine Aminotransferase (ALT)  $36.20 \pm 45.10$ , Alkaline Phosphatase (ALP)  $535.64 \pm 720$ . Twenty-seven (95%) of patients achieved End treatment response (ETR) at 12 weeks and 25 (91%) patients achieved Sustained virological response (SVR) at 24 weeks. There was no deterioration of hepatological status in any of the patients.

**Conclusion:** HCV is highly prevalent in patients undergoing hemodialysis and treatment with SOF and VEL demonstrates a good response 91% of patients achieved SVR at 24 weeks.



### 3. Performance of hepatitis C core antigen assay compared to PCR for confirmation of chronic infection, in a community clinic in Pakistan

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**Background & Aim:** Hepatitis C core antigen (HCV Ag) is becoming increasingly recognized as an alternative to molecular testing (HCV PCR) for confirmation of chronic hepatitis C. Studies are lacking on the performance of this assay in a genotype 3 (GT3) predominant country like Pakistan. We conducted a prospective trial to evaluate the diagnostic performance of HCV Ag.

**Methods:** HCV antibody-positive patients, requiring confirmation testing were recruited at the Pakistan Kidney and Liver Institute and Research Center, Lahore, Pakistan from August – October 2018. Those with previously known diagnosis or treatment history were excluded. The Abbott HCV Ag assay was used. Results  $> 3.00$  fmol/L were considered positive. The Abbott Real Time HCV assay (RT-PCR) was used for PCR testing with a lower limit of detection = 12 IU/mL. Sensitivity and specificity analysis were calculated. Spearman's rho test was run to assess correlation.

**Results:** A total of 394 patients were recruited. Blood sample quality for HCV Ag and/or HCV PCR was inadequate for 11 subjects. Data were analyzed for 383 samples. The mean age of the patients was 43.3 years. 53% (n=203) were female, 9% (n=35) had HTN, 10% DM (n=40), 3 patients were HBsAg positive, while 1 was HDV positive. 20/344 had APRI  $> 2$ . Overall sensitivity was 97.9% and specificity was 100%, PPV of 100%, NPV 95% (P $<0.0001$ ). The lowest limit of detection of HCV Ag was an HCV RNA value of 4,657 IU/ml. The levels of HCV Ag were highly correlated with those of HCV RNA by Spearman's rank correlation test (r =0.93, P  $< 0.0001$ ).

**Conclusion:** HCV Ag represents a good alternative with high sensitivity (97.9%) and specificity (100%) as compared to molecular testing in genotype 3 predominant population and can be incorporated into algorithms to improve linkage to care

#### **4. Thirty-Day Readmission after Esophageal Variceal Hemorrhage and Its Impact on Outcomes in the Tertiary care Hospital**

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**Background and aims:** Esophageal variceal hemorrhage (EVH) is a potentially fatal Gastrointestinal emergency. This study aimed to evaluate the in-hospital mortality rate, 30-day readmission rate, and its impact on mortality and morbidity in EVH patients.

**Methods:** A descriptive study (prospective) was conducted at the Gastro-hepatology department of AIMS Hyderabad from September 2019 to January 2020. Adults with EVH were included in the study. The clinical characteristics and laboratory data at admission were documented, based on which MELD and CTP scores were calculated. The surviving patients were then followed via telephone after 30 days and readmission and its reasons, mortality, and morbidity within 30-days were determined.

**Results:** A total of 95 EVH patients were included in the study, out of which 74.7% were males. The mean age of the participants was 49.56 years. The etiology was Hepatitis C in 62 (65.3%) patients. The in-hospital mortality was 5 (5.3%). Of those who survived, 17 (17.5%) had re-admissions with rebleeding as cause in 7 (7.4%) patients. The rest of the patients were admitted with other complications of end-stage liver disease.

**Conclusion:** The all-cause 30-day readmission rate after EVH was 17.5% with more than one-third of the cases due to re-bleeding. The readmission was not associated with higher rates of mortality (in-hospital mortality rate vs readmission mortality rate).



## 5. SEVERITY OF COVID-19 IS ASSOCIATED WITH LIVER INJURY IN PATIENTS WITHOUT PRE-EXISTING LIVER DISEASE

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**Objective:** Covid-19 is known to disturb Liver function tests (LFTs). Not much literature is available regarding the effect of COVID-19 on LFTs in patients without pre-existing liver disease. The study aimed to find the effect of COVID-19 in these patients.

**Methods:** During four months, 142 patients were admitted with SARS-COV-2. Seven patients were excluded due to a history of chronic liver disease.

**Results:** A total of 135 patients were included in the study aged between 18-95 (mean  $57.7 \pm 15.6$ ). Male were 93 (68.9%). Hypertension was present in 74 patients (54.8%) and diabetes in 48 (35.6%). Fever was the chief complaint in 112 (83%), followed by dyspnea 93 (68.9%) and cough 79 (58.5%). Elevated AST was seen in 82 (61%), GGT in 82 (61%), ALT in 61 (45%), alkaline phosphatase in 19 (14%), bilirubin in 6 (4%) and low albumin in 35 (26%). Severe COVID-19 when compared with mild to moderate disease was associated with elevated  $AST > 2$ -time upper limit normal (2ULN) ( $p=0.002$ ),  $GGT > 2ULN$  (0.026), and lower albumin ( $p=0.020$ ).  $AST > 2ULN$  was associated with a high SIRS score (0.045), high procalcitonin ( $p=.045$ ), higher ferritin ( $p=0.005$ ), lower PaO<sub>2</sub> ( $p=0.044$ ), and higher SOFA score ( $p=0.002$ ) pointing to the inflammatory response as the cause of liver injury.

**Conclusion:** A large number of patients suffering from COVID-19 have evidence of liver injury which appears to be secondary to an inflammatory response. The degree of liver damage correlates with the severity of COVID-19. Hence close monitoring of these variables is important as a part of the assessment of the vulnerable population.



## 6. The virological response of Sofosbuvir and Daclatasvir based Direct acting antivirals in children with Hepatitis C infection

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**Introduction:** Hepatitis C virus (HCV) infection remains an important global health problem with chronic infection affecting approximately 11 million children worldwide. Currently, most new HCVinfected cases are thought to occur through vertical transmission. Treatment options for children are currently limited. For pediatric patients, a new era of highly effective DAA agents is beginning, and the first results of available clinical trials are very promising. We aimed to determine the efficacy and safety of direct-acting antiviral agents in children with hepatitis C infection.

**Methods:** Children with age less than fifteen and HCV infection were included in this study and patient's baseline characteristics were recorded. The treatment regimen and duration of treatment were also recorded and RVR, EVR, ETR, and SVR 12 was also noted. Results were presented as mean  $\pm$  SD for quantitative data or as numbers with percentages for qualitative data. Continuous variables were analyzed using the Student t-test; while categorical variables were analyzed using the Chi-square test. A p-value  $<$  0.05 will be considered statistically significant.

**Results:** A total of 26 patients were included in the study. Out of them,20(76.9%) were males and 6 (23.1%) were females. The baseline characteristics showed a mean age of 11.2 years with SD  $\pm$ 2.7, Mean weight of 28.1 kg with SD  $\pm$ 10.3, Hb of 10.5 with SD  $\pm$ 1.6, TLC of 11.8 with SD  $\pm$  18.7, Platelets of 281.5 with SD  $\pm$ 84.7, INR of 0.99 with SD  $\pm$ 0.1, Albumin of 3.7 with SD  $\pm$ 0.38, T.B of 0.56 with SD  $\pm$ 0.37 and SGPT of 31.03 with SD  $\pm$ 20.4.The most common HCV genotype was 1 ,seen in 12(46.2%)patients followed by genotype 3,seen in 9(34.6%) patients. Fourteen (53.8%) patients underwent treatment with Sofosbuvir /Ribavarin regimen, out of the 9(64.28%) required 6 months of treatment. Sofosbuvir/Daclatasvir/Ribavarin regimen was administered to 12(46.2%) patients with only one patient (8.4%) requiring 6 months of treatment. RVR was achieved in 11 (91.6) patients receiving Sofosbuvir/Daclatasvir/Ribavarin while in just 5 (35.7%) patients receiving Sofosbuvir /Ribavarin (p-0.003).ETR was achieved in all patients receiving Sofosbuvir/Daclatasvir/Ribavarin and in 9(64.28%) patients receiving Sofosbuvir/Ribavarin (p-0.021).SVR 12 and SVR 24 were achieved in all patients receiving Sofosbuvir/Daclatasvir/Ribavarin while in 10 out of 14 patients receiving Sofosbuvir /Ribavarin (p-0.003).

**Conclusion:** The Triple therapy (Sofosbuvir/Daclatasvir /Ribavarin) was associated with better outcomes and prolonged sustained virological response in children with HCV infection.



## 7. Hepatoma Arterial Embolization Prognostic (HAP) score as a predictor of hepatic decompensation in patients with hepatocellular carcinoma (HCC) treated with Transarterial chemoembolization (TACE)

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**Introduction:** TACE is an effective and recommended treatment for intermediate HCC which is invasive and carries the risk of post embolization syndrome and decompensation of underlying liver disease. Thus proper selection is paramount to achieve an optimal outcome with a low risk of hepatic decompensation. HAP score which incorporates serum, bilirubin, albumin, alpha-fetoprotein tumor size; is a very useful bedside tool that can easily be used to stratify and prognosticate patients with intermediate-stage HCC before an invasive and high-risk procedure.

**Methods:** Patients with HCC entitled to TACE were enrolled. After performing TACE patients were followed after 15 days to look for any signs of decompensation. HAP score calculated in all patients. Patients were divided into two groups HAP A (low risk), HAP B (high risk). Chi-square was used to compare the risk of hepatic decompensation between the two groups.

**Results:** Among the 64 study population, 47 (73.4%) were males of mean age  $53.8 \pm 9$  years. The most common underlying etiology was HCV-CLD 51 (79.7%). The majority have CTP A6 24 (37.5%), while 46 (71.9%) had MELD score less than 10. In total, 30 (46.9%) were in Group A (low risk: HAP < 2) while 34 (53.1%) were in Group B (high risk ; HAP =2 ). In our study 23 (35.9%) individuals decompensated after TACE, among them, 18 (52.9 %) were in the high-risk group, while six patients were in a low-risk group. The statistically significant predictive factors for Post TACE hepatic decompensation were HAP = 2 (Group B) ( $p= 0.003$ ), tumor size ( $p= 0.00$ ) and alpha-fetoprotein >400 ( $p=0.025$ ). Higher HAP = 2(GROUP B) was associated with post-TACE decompensation manifested by a significant p-value ( $p=0.003$ ) with a sensitivity and specificity of 78.26% and 60.98% respectively. The positive predictive value of the HAP Score was 52.9% while its negative 83.33%.

**Conclusion:** HAP score is a simple, easily calculated scoring system that can help in predicting post-TACE decompensation on an OPD basis. Thus, the deleterious complication of TACE can be avoided.



## 8. PNPLA-3 gene (rs738409) single nucleotide polymorphism and its affect on liver fibrosis, steatosis, and insulin resistance in patients with non-alcoholic fatty liver disease.

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**Introduction:** The global burden of Nonalcoholic fatty liver disease (NAFLD) is on a rise. PNPLA3- single nucleotide polymorphism (SNP) has been associated with increased vulnerability to NAFLD. This study is aimed to determine the prevalence of PNPLA3-SNP (rs738409, encoding I148M) and its association with liver fibrosis, steatosis, insulin resistance in patients of NAFLD

**Methods:** All eligible cases were identified and PNPL3 SNP (rs738409, encoding I148M) was evaluated by using amplification-refractory mutation system polymerase chain reaction (ARMS-PCR). Liver fibrosis, liver steatosis and insulin resistance were assessed as covariates.

**Results:** A total of 62 patients were enrolled; 47 were male. Out of 62, 22 were diabetic, 13 were hypertensive and 38 had dyslipidemia. 12/62 patients were found to have PNPLA-CC, 40 had PNPLA-CG and 10 had PNPLA-GG genotype. Patients with positive G allele were found to have elevated BMI (mean 31.41 kg/m<sup>2</sup>) and GGT (mean 102 IU/L) with a p value of 0.039 and 0.027 respectively. Out of 43 patients with elevated ALT, 36 were positive for G-allele (84%) whereas, 19 patients with normal ALT, 14 were positive for G-allele (74%), however p value was calculated to be insignificant. HOMA was calculated in 27 patients. 23/27 patients had HOMA for 2 or more and of these 23 patients 20 were positive for G allele (87%). 37/62 patients underwent transient elastography. Controlled attenuation parameter was mild 10 patients, moderate in 7 and severe in 20 patients. 17 patients falling in severe category were positive for G allele (85%). 22 patients were found to have liver stiffness of 9.6 Kpa or more. 19/22 were positive for presence of G allele.

**Conclusions:** PNPLA(rs738409) -CG is the most prevalent genotype among our patients with NAFLD and the presence of G allele was associated with higher body mass index and raised GGT. Further studies with larger sample size are required.



## 9. Role Of Low Platelet To White Blood Cell Ratio In Predicting Mortality Among The Patients With Acute On Chronic Liver Failure

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**Introduction:** ACLF occurs in approximately 30% of hospitalized patients with cirrhosis who have an acute complication of their liver disease and have a short term mortality of 50-90%. One of the hematological markers of the systemic inflammatory response is platelet to white blood cell ratio (PWR) which not only heralds the risk of infectious complications but also predicts poor outcomes of patients. A significant amount of research work has been performed to evaluate PWR in predicting the prognosis of patients suffering from various diseases. However, little work has been done in our country to use this relatively simple tool in predicting outcomes. This study aims to evaluate the platelet to white blood cell ratio (PWR) in predicting mortality among patients with acute on chronic liver failure.

**Methods:** All patients fulfilling the criteria for ACLF were included in the study and the patient's baseline characteristics were recorded. The duration of stay in the hospital and the outcome in terms of mortality was noted. These indices were then used to calculate the platelet to white blood cell count ratio. Results were presented as means  $\pm$  SD for quantitative data or as numbers with percentages for qualitative data. Continuous variables were analyzed using the t-test or the Mann Whitney test; while categorical variables were analyzed using the Chi-square or the Fisher exact test. A p-value of  $<0.05$  was considered statistically significant

**Results:** The total number of patients included in the study was 63. Among which, 41 were males and 22 were females. The mean age was 37.02 with SD  $\pm 17.23$ . At the time of presentation, thirty-seven patients had less than three organ failure while more than 3 organ failure was noticed in 27 patients. Out of 63 patients, 26 (41.3%) patients expired due to complications of ACLF while 37 (58.7%) were discharged. The most common cause of chronic liver disease was HCV in 14 (22%) patients while HBV was the second most common etiology seen in 12 (19%) patients. The most common cause of acute insult was HEV, which was seen in 12 (15%) patients. The baseline characteristics showed mean Hb of 9.59 with SD  $\pm 1.87$ , TLC of 12.96 with SD  $\pm 10.1$ , platelets of 134 with SD  $\pm 94.11$ , INR of 2.2 with SD  $\pm 0.7$ , serum creatinine of 1.9 with SD  $\pm 2.01$ , Total Bilirubin of 17.9 with SD  $\pm 10.0$ , and serum albumin of 2.25 with SD  $\pm 0.69$ . The mean CTP score was 11 and the MELD score of 28 with SD  $\pm 7.86$ . Platelet to WBC ratio (PWR) was calculated and a value of  $\leq 8$ , was found to be significantly associated with a higher risk of mortality in patients with ACLF with a p-value of 0.005. The area under ROC of PWR is 0.7. At a cutoff of  $\leq 8$ , the sensitivity, specificity, NPV, and PPV were 81%, 50%, 81%, and 50% respectively for PWR in predicting increase risk of mortality in ACLF along with diagnostic accuracy of 70.27%.

**Conclusion:** A low PWR ratio was associated with an increased risk of mortality in patients with ACLF and was found to be an independent predictor of mortality.



## 10. PEDIATRIC LIVER CIRRHOSIS INPATIENTS: ETIOLOGY, CLINICAL PRESENTATION, AND OUTCOME

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**Background and Aims:** Liver cirrhosis is an important cause of morbidity and mortality among pediatric patients. The study aimed to identify the etiology, clinical presentation, and outcome of liver cirrhotic inpatients.

**Methods:** In this retrospective study, all pediatric (age =16 years) cirrhotic patients requiring hospital admission over the last 10 years (2009 to 2019) were enrolled. Etiologies of cirrhosis according to age groups, clinical presentations, and outcome of these patients were recorded.

**Results:** Of the total 181 patients included in the study, 115 (63.5%) were males with mean age of 8.6 (+4.34) years (range: 2 months - 16yrs). Commonest etiologies of cirrhosis were: =1yr, biliary atresia (BA) 100%; 1 to =5yrs, hepatic storage disorders (HSD) 21.9%, Budd Chiari Syndrome (BCS) 14.6%, and progressive familial intrahepatic cholestasis (PFIC) (12.2%). Above 5yrs: hepatitis B virus (HBV), autoimmune hepatitis (AH), and Wilson's disease (WD). The etiology of cirrhosis remained unclear despite extensive investigations among 24 (29.6%) cases. Commonest clinical presentations included abdominal pain (HBV); failure to thrive [FTT] (BA, HSD); progressively severe itching (BA, PFIC); progressive ascites (BCS); respiratory or urinary infections (AH); acute on chronic liver failure [ACLF], portosystemic encephalopathy [PSE] (WD). Of the total number of patients, 116 (64.1%) patients are under regular follow up, 37 (20.4%) died, while 28 (15.4%) patients were lost to follow up. Among those who died, the highest mortality was noted amongst patients with BA (64.3%), PFIC (33.3%), BCS (30.8%), and WD (23.5%).

**Conclusion:** Commonest causes of pediatric cirrhosis were BA (<1yr); HSD, BCS, PFIC (1-5yr); and HBV, AH, WD (>5yr). Abdominal pain, progressive ascites, ACLF, PSE, FTT, severe itching, and systemic infections were the commonest clinical presentations. One-fifth of the patients died and mortality was high among those with BA, PFIC, BCS, and WD in the absence of liver transplantation.



## 11. Portosystemic Encephalopathy (PSE) recurrence in cirrhotic patients and its risk factors

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**Background:** Recurrence PSE in cirrhotic patients is associated with worse outcomes. It is important to assess the risk factors for recurrent PSE so that appropriate prevention and prognostication can be done.

**Objective:** To assess the frequency of recurrent PSE in cirrhotic patients after the first episode of PSE and its risk factors.

**Method:** It is a retrospective study done in the section of Gastroenterology, The Aga Khan University Hospital, Karachi, Pakistan from Jan 1, 2019, till December 31, 2019. Patients who were admitted for the first time with PSE and admitted within 3 months of index PSE were enrolled in the study. Grading of PSE Grade (I-VI), laboratory tests(Bilirubin, Albumin, Creatinine ), ascites with SBP, gastrointestinal bleeding (GIB), acute kidney injury ( AKI) and( CTP, MELD) were collected by chart review and analyzed by SPSS version 20.

**Result:** Total 61 patients were included in study and 10 were lost to follow up. Mean age was 59+/- 10, male was 58 %. Diabetic were (64%) and 54% were hypertensive. As per etiology HCV (59%), HBV (27%), Alcohol (7%),other (7%).Out 51 patients 33 readmitted with PSE, 6 were expired and rest followed in clinic. Risk factors were UTI ( 19%),AKI (15%),Constipation(15%),Hyponatremia(14%),SBP( 12%),Hypokalemia (13%), GIB (8%) .Most of patient were in CTP score C ,(75%),CTP Score B (25%).MELD >18 ( 65%), TB>3( 41%),>6(10%),<3(49%) and Albumin >3.5 (42%), <2.8(20%),2.8-3.5(38%).PSE Grade 1-2( 42%),PSE-3(39%),PSE-4(19%).All patients who were expired were in PSE-4 with raised creatinine >3.

**Conclusion:** MELD score >18, raised TB>6mg/dl, decreased sodium, and low Albumin significantly associated with PSE recurrence

## 12. The pattern of autoimmune liver disease in Southern Pakistan

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**Introduction:** This study aims to describe the pattern of autoimmune-related liver disorders in patients presenting to a tertiary care hospital.

**METHODS:** Patients presenting to the hepatology clinic having autoimmune liver problems in the last three years were identified through the ICD coding. Patients of autoimmune hepatitis (AIH) were evaluated by revised AIH criteria. Autoimmune liver disorders other than autoimmune hepatitis were also identified and included in the study.

**Results:** The total number of patients was 103. The mean age was 45 with a range of 11-84. Mean BMI was 23.58. Females accounted for 64% of the participants. Diabetes was seen in 26/103 (25%) and 10/103 (9%) were hypertensive. Autoimmune hepatitis (AIH) type 1 was present in 55(53.4%), Primary Biliary Cholangitis (PBC) 20 (19.4%), PBC-AIH overlap hepatitis 8(7.8%) satisfying Paris criteria, AIH type 2 in 7(6.8%), IgG4 related liver disease 4(3.9%), celiac hepatitis 3(2.9%), Psoriasis with hepatitis 3(2.9%), Sarcoidosis with liver involvement 2 (1.9%) and Ichthyosis with hepatic involvement in 1(1%). Among serological markers, ANA was positive in 56(54.4%), LKM 8 (7.8%), ASMA 7(6.8%), P-ANCA 1%. AMA-M2-IgG was present in 12/19 (63.1%) PBC patients and 7/8 (87.5%) overlap patients. AMA-M2-3E IgG was seen in 11/19 (57.8%) PBC patients and 5/8 (62.5%) overlap patients. Glycoprotein-210 antibody (gp-210-IgG) was present in 2/55(3.6%) AIH 1 patients, 1/27 AIH2 (3.7%), 2/8 overlap patients and 2/19(10.5%) in patients with PBC. Raised IgG levels were documented in 44.6 % of the patients. Cirrhosis was present in 46/103(44.6%) patients with CHILD C in 7/46 (6.7%) patients. Based on the revised international AIH score, 56/103 had probable AIH and 13/103 had definite AIH. Liver biopsy was performed in 40/103(38.8 %) patients with the majority of them being non-cirrhotic.

**Conclusion:** A wide spectrum of autoimmune liver disease exists in Pakistan, though rare but is an important cause of liver-related morbidity and mortality.



### 13. THE ETIOLOGY OF DRUG INDUCED LIVER INJURY

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**BACKGROUND:** Drug-induced liver injury (DILI) is an uncommon, but potentially fatal, cause of liver disease that is associated with prescription medications, OTC drugs, herbal and dietary supplements (HDS), and other xenobiotics that result in abnormalities in liver tests or in hepatic dysfunction that cannot be explained by other causes.

DILI is essentially a clinical diagnosis of exclusion. Aggravation of liver enzymes after the re-introduction is diagnostic, but at the same time could be lethal. Avoidance of the offending drug is curative in most cases. Limited studies are available in our country. The reason for this study was that we need our data regarding the prevalence and etiology of DILI. Moreover, this study will be beneficial to determine the burden of DILI in Pakistan.

**METHODS AND MATERIAL:** An observational, cross-sectional study was conducted at Jinnah Postgraduate Medical Centre, Karachi, during the period from 1st December 2019 to 31st August 2020. Male and female patients of any age and with documentation of liver injury secondary to any drug were eligible for inclusion in this study. Patients with concomitant other causes of liver were excluded.

**RESULTS:** A total number of 50 patients were enrolled in the study, 27 (54%) were male and 23 (46%) were female. The mean age of the patients was  $34 \pm 10.6$  years. Most of the patients 20 (40%) were in Grade-I injury. R-value was calculated in all patients to assess the effects of drugs and it was found to be mean  $3.4 \pm 1.8$ . Mean Alanine transaminase was 426.0 mg/dl and bilirubin was  $7 \pm 6.2$  mg/dl. 34 (68%) patients were improved and 16 (32%) patients became died. Isoflurane (70%, n35) was seen as the main reason for DILI

**CONCLUSION:** Isoflurane was the most common hepatotoxic drug among patients who underwent surgery.



## 14. CLINICAL CHARACTERISTICS AND FEATURES OF PATIENTS WITH WILSON'S DISEASE VISITING THE GI CLINIC OF A LARGE TERTIARY CARE CENTRE

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**BACKGROUND AND AIMS:** Wilson's disease (WD), is an autosomal recessive disease, due to the mutation in ATP7B gene, resulting in excess copper accumulation.<sup>1</sup> It mainly affects the liver and the brain but can involve any organ of the body.<sup>2</sup>

**METHODS:** Patients visiting our GI clinic or admitted via the OPD/ ER from July 2020 until November 2020 were included. Diagnosis of Wilson's disease was made based upon the AASLD criteria, requiring 2/3: Serum ceruloplasmin less than 20 mg /dL, 24-hour urinary copper more than 100 microgram/ 24 hours in symptomatic patients, and/or the presence of KF rings.<sup>3</sup>

Lab parameters were also checked including CBC, UCE, LFT, Albumin, PT/INR, and other workups including viral serology, autoimmune profile, ultrasound abdomen, upper GI endoscopy, a liver biopsy, and MRI brain.

**RESULTS:** A total of 30 patients were diagnosed with Wilson's disease. Mean age was 13 years  $\pm$  5 years. Male was the predominant gender, seen in 20 patients ( 66.7%). The most common presenting complaint noted was abdominal distention in 11 /28 patients ( 39.3%), followed by fever and abdominal pain in 4/28 (14.3%) and UGIB in 3/28 (10.7%). The mean CTP score was 9 while the mean MELD score was 18.

The mean serum ceruloplasmin level was 11.8  $\pm$ 7 mg/dL, the mean 24-hour urinary copper was 200mcg/24hrs. KF ring was seen in 15 patients (50%). Ultrasound abdomen revealed CLD features in 22/30 (73%). ANA was positive in 19/30 (63%), a raised IgG was seen in 7/30 (23%), while viral markers were absent in 28/30 (93%). An upper GI endoscopy was done in 16 cases, with varices noted in 9 (30%) of them. An MRI brain was done in 3 cases. A liver biopsy was performed in a single case.

**CONCLUSION:** Early identification of WD is essential due to overlapping features between it and AIH, especially in the younger age groups.

**TABLE 1:** Baseline laboratory parameters

Hb	9.5g/dL	TBR	6.4 mg/dl	Mean serum Ceruloplasmin (mg/dL)	11.8 $\pm$ 7 mg/dL	ANA positive	19/30 (63.3%)
TLC	7.8K	SGOT	123 U/L	24hr Urine Copper (mcg/24hr)	200mcg/24hrs respectively	IgG(g/L) more than 15.6g/L	7/30 (23.3%)
Plts	118K	SGPT	79 U/L	KF Rings Present	15/30 (50%)	Viral Serology absent	28/30 (93%)
INR	2.1	ALP	268 U/L				
Cr	0.56 mg/dl	GGT	62 U/L				
		Albumin	4.1 g/dL				



## 15. QUANTITATIVE ANALYSIS/TISSUE CHARACTERIZATION FOR MALIGNANT LYMPH NODES USING ENDOSCOPIC ULTRASOUND EUS-EG

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**BACKGROUND:** Endoscopic Ultrasound Elastography (EUS-elastography), has emerged as a useful modality of estimating tissue stiffness. Second-generation elastography allows quantitative measurements of the average elasticity of a lesion. With help of this study, we can improve the diagnostic accuracy of malignant lymph nodes. The main objective of this study is to assess the specificity, sensitivity, and predictive values of the strain ratio (SR) measured by EUS-elastography in differentiating benign from malignant lymph nodes (LNs).

**PATIENTS AND METHODS:** It is a prospective study that included 106 patients with Abdominal/Mediastinal lymphadenopathy. Second generation EUS-elastography was performed, in addition to detailed sonographic features, including size, diameter, character, shape echotexture (echogenic or echo-poor), and hilum (lost or preserved), were also included. The strain ratio was calculated by EUS-Elastography. Strain Ratio Cut-off was calculated on basis of ROC (full size) curve analysis.

**RESULTS:** The majority of the study population were males: 64 (60.4%) with a mean age of  $46.3 \pm 15.5$  years. The mean size of lymph nodes was  $22.2 \pm 7.7$  mm and the Mean strain ratio was  $61.9 \pm 46.3$ . In total 36 (34 %) patients had malignant lymphadenopathy on histopathology in which 88.8% were found to be hard on elastography. On statistical analysis, a higher strain ratio ( $p=0.002$ ) and lymph node size  $\geq 20$  mm ( $p<0.001$ ) were found to be significantly associated with the presence of malignant disease. At cut off of 27, for strain ratio sensitivity, specificity, positive and negative predictive value were 80.5 %, 58.7 %, 85.2%, and 66.04%, respectively with AUROC of 0.72.

**CONCLUSION:** Although histology remains the gold standard for diagnosis, the EUS-EG strain ratio is a useful technique to predict malignancy in resource restrained settings where biopsy is not possible. With lymph node size  $\geq 20$  mm and EUS-EG strain ratio  $\geq 27.1$ , the likelihood of malignancy is high.



## 16. Percutaneous trans-hepatic biliary drainage: A descriptive cross-sectional study from a tertiary care hospital in Pakistan

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**BACKGROUND:** The biliary system can be accessed for therapeutic purposes through an either endoscopic or percutaneous approach. Percutaneous transhepatic biliary drainage (PTBD) includes cannulation of the bile duct and is an image-guided procedure, and includes internal/external catheter drainage of bile contents. This study aims to determine the major indications, outcomes, and complications of PTBD in our hospital in the last four years.

**METHODS:** A retrospective review of patients who underwent PTBD from January 2015 to December 2018 was performed. Patient data were extracted from the hospital electronic database and case records, including demographic data, relevant investigation findings, indications, outcomes, and complications of PTBD were recorded in the performa.

**RESULTS:** Data from 210 patients was collected, including 101(48.1%) males and 109 (51.9%) females. The mean age was 56.5 years (range 23 to 71 years). The major indications of PTBD included the patients who were unstable for ERCP 75(35.7%), failed ERCP i.e. unable to cannulate the CBD 73(34.8%), high up obstruction 59(28.1%) and other non-specified causes 3 (1.4%). No post-procedure complications were seen in 151(71.9%), catheter/stent occlusion or displacement was noticed in 14(6.7%), bleeding in 6(2.9%), infection in 18(8.6%) and prolonged hospital stay i.e. more than 5 days in 21(10%). Among all of them 179(85.2%) showed clinical improvement and were discharged, 21(10%) died in the hospital and PTBD was failed to relieve obstruction in 10(4.8%) patients. Readmission within 6 months with obstruction was seen in 47(22.4%) needing reintervention. Rendezvous ERCP was done in 12 (5.7%) among all the patients.

**CONCLUSION:** In our study, the major indications for PTBD were found to be the patients who were not stable enough to undergo endoscopic drainage and the ones in whom ERCP was attempted but failed. In conclusion, PTBD was found to be a safe and useful approach to relieve obstruction in unstable patients and ERCP failure.



## 17. Agt score as a predictor of common bile duct stone using endoscopic ultrasound(eus) in patients with intermediate probability criteria according to asge guidelines

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**BACKGROUND:** The performance of intermediate criteria guidelines for the prediction of choledocholithiasis (CL) has been validated in very few studies. The objective of our study was to prospectively assess the accuracy of the American Society for Gastrointestinal Endoscopy (ASGE) guidelines intermediate criteria for the identification of CL. Furthermore, to identify the noninvasive predictors of CL.

**METHODS:** A one-year prospective assessment of ASGE intermediate criteria was performed for the prediction of CL. Each patient underwent endoscopic ultrasound (EUS) before ERCP. AGT score was calculated as a non-invasive predictor for CL. AGT score was calculated for each individual as  $(ALP+GGT)/(T.B)$ . Sensitivity and specificity were calculated for predicting CBD stone by AGT score.

**RESULTS:** A total of 71 patients were suspected of choledocholithiasis according to ASGE intermediate probability criteria. The Mean age was  $52.9 \pm 11.9$  years and there were 42(59.1%) males. At presentation, 66(92.9%) had abdominal pain and five patients (7%) had gall stone pancreatitis. On Endoscopic ultrasound (EUS), sludge was found to be in 7 patients (9.9%). On ERCP, 47 patients (66.2%) were found to be positive for choledocholithiasis.

Whereas, on noninvasive investigations TLC, ALP and GGT were significantly raised in the stone positive group as compared to the stone negative group. ( $8.11$  vs  $6.97$  and  $p=0.03$ ) for TLC, ( $398$  vs  $197$ ,  $p=0.0001$  and  $313$  vs  $215$ ,  $p=0.046$ ) for Alkaline phosphatase and GGT respectively. AGT score was found to be significantly associated with the presence of CBD stone with a p. value of  $0.001$ . The area under ROC of AGT score is  $0.852$ . At a cut off  $467$ , the sensitivity, specificity, NPV, and PPV were  $91.49\%$ ,  $80.95\%$ ,  $91.49\%$ , and  $80.95\%$  respectively for AGT score in predicting choledocholithiasis.

**CONCLUSION:** Performance of intermediate probability criteria for the prediction of CL was accurate in  $66.2\%$  of patients. Total bilirubin, gamma-glutamyl transferase, and AGT score were found to be the predictor of CBD stone.



## 18. Ergonomics of gastrointestinal endoscopies: musculoskeletal among endoscopy physicians, nurses, and technicians

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**OBJECTIVE:** In this study, we aim to document the prevalence of musculoskeletal injuries and knowledge, awareness, and practice of ergonomic intervention by endoscopists and the axillary staff. and finally understanding the site-specific limitations of ergonomics in the endoscopist suite.

**METHODS:** An 11-question self-administered questionnaire was distributed in 3 major tertiary care hospitals in June 2019 and a site survey of the endoscopist suite using a 13 point checklist was done.

**RESULTS:** Data from 56 participants was collected, male representing 39 of the respondents. 23.2% were endoscopists, 16.1% GI residents, 26.8% endoscopy nurses, 33.9% endoscopy technician.

75% reported experiencing pain or numbness, with pain in the neck (41.1%) lower back pain (32.1%) shoulder pain (21.4%), thumb pain (12.5%) hand pain (23.2%), elbow pain (8.9%) and carpal tunnel (7.1%).

25% of those having pain attributed it to endoscopy 39.3% were not certain whether the symptoms had been caused by endoscopy, 10.7% said that symptoms were not caused by endoscopy. 21.4% had to take time off from work, 33.9% took medications for resolution of pain.

21.4% use some modifications to prevent injury and Endoscopic monitor at eye level (21.4%), cardiac monitor in front (12.5%) stopped to move patients (8.9%) sitting while performing colonoscopy (12.5%), height-adjustable bed (23.2%).

Out of a 13 point checklist developed only 4 items were found in all 5 major tertiary care hospitals and two important ergonomic corrections were not found in any of the major tertiary care hospitals.

**CONCLUSION:** The high prevalence of musculoskeletal injuries highlights the endemic problem. Lack of knowledge and awareness of endoscopy procedures causing musculoskeletal injuries warrants urgent correction. There is a need to incorporate ergonomics at an institutional level to minimize loss of productivity.



## 19. Digestive tract neoplasms in young individuals: demographics, staging and risk factors

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**BACKGROUND AND AIMS:** Digestive tract neoplasms (DTN) have become increasingly common worldwide among young individuals (YIs) over the last few decades. This research aimed to study the types, demographics, stage at presentation, and risk factors of digestive tract neoplasms in young individuals.

**METHODS AND RESULTS:** In this cross-sectional study, YI (i.e =40 years) presenting with any DTN including gastrointestinal neoplasms (GIN), hepatobiliary neoplasms (HBN), periampullary neoplasms (PAN), and others from June 2016 to May 2020 were included. Baseline laboratory tests, tissue diagnosis, and staging were performed while risk factors were documented. A total of 163 patients were included in the study, of whom 82 (50.3%) were males. Mean age was 29.9 (+ 9.57) (range: 8 months – 40 years). Most DTN (93.3%; n=152) were malignant. The commonest neoplasms were lower GIN (LGIN) 52 (31.9%), followed by HBN 46 (28.2%), upper GIN (UGIN) 44 (27%), and PAN 18 (11%). Commonest among LGIN were rectal 37; among HBN: hepatocellular cancer (HCC) 9, cholangiocarcinoma (CC) 9; and among UGIN: esophageal 25 and stomach 14. Rectal cancers were mostly sporadic (82.7%) with frequent signet ring cell histology (40.5%), and affected relatively younger ages compared to upper GIN and PAN. GIN were mostly locally advanced with higher resectability [LGIN 90.4%; UGIN 79.5%] while HBN were more advanced with lower resectability [HCC (44.4%); CC (33.3%)]. Poor dietary habits and poor socioeconomic status were common with UGIN (63.6%, 50%) and HBN (56.5%, 54.3%), respectively.

**CONCLUSION:** Commonest DTN among YI were LGIN followed by HBN, UGIN, and PAN. Rectal cancers affected relatively younger ages and were mostly sporadic. HBN was more advanced in stage and unresectable compared to GIN. Poor dietary habits and poor socioeconomic status may be important contributors to carcinogenesis.

## 20. Trends in Etiology of Chronic Liver Disease referred for Liver Transplant evaluation in Pakistan 2020

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**BACKGROUND AND AIMS:** Liver cirrhosis (LC) is a major and life-threatening health problem worldwide. There is scanty data on changing trends in the etiological distribution of LC. In this study, we examined the liver disease etiology trends among adults who were referred for liver transplant evaluation.

**METHODS:** A descriptive study (prospective) was conducted at the Gastro-hepatology outpatient department of AIMS Hyderabad from August 2020 to September 2020. It's an ongoing study. Adults with liver cirrhosis were included in the study and were evaluated for a liver transplant. The clinical characteristics, etiology, and laboratory data were documented, based on which MELD, CTP scores, and BCLC stage were calculated. Descriptive analysis was performed using SPSS software.

**RESULTS:** A total of 202 cirrhotic patients, out of which 68.3% were males. The mean age of the participants was 48.62 years  $\pm$  12.4 (Standard deviation) with the majority in the 21-50 years of age group. The etiological agents were as follows: Hepatitis C virus (HCV) 61.9%, Hepatitis B virus (HBV) (13.9%), HBV+ HDV (11.9%), NASH (7.9%), HBV+HCV and NASH+ALD (1.3%) each, HCV+NASH (1%) and HBV+HCV+NASH (0.5%).

Twenty-seven percent of patients had hepatocellular carcinoma (HCC) of which the majority were in BCLC Stage D (11.9%). The underlying etiology in HCC was HCV (74.1%).

**CONCLUSION:** Although HCV remains the leading etiology of cirrhosis among HCC and non-HCC patients, there is a rise in the prevalence of NASH observed in our study. This could be attributed to the obesity epidemic and escalating prevalence of diabetes and metabolic syndrome worldwide including developing countries like Pakistan.



## 21. Liver patients avoid giving honest history in pre-clinic triage for COVID-19 screening

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**OBJECTIVE:** The patients visiting the outpatient clinics during the COVID-19 pandemic may not give honest history regarding their symptoms and COVID-19 exposure due to fear of being sent to quarantine. We aimed to assess the accuracy of COVID-19 related history and symptoms given in the pre-clinic triage.

**METHODS:** This is a single centre observational study. A total of 301 patients attending the GI clinic were included. A Questionnaire was prepared comprising of demographic details of the patient, exposure and symptoms of COVID-19. The questionnaire was first administered and filled by the receptionist in the triage. Later, the response was verified by the consultant in the clinic. Any discrepancy in the answers was then recorded.

**RESULTS:** In the preclinic triage, patients gave a positive response to the following questions: It showed substantial disparity all of which carried statistically significant p-value of  $<0.001$ . However not all the patients who admitted with one of the above symptoms were labelled as suffering from COVID-19 after assessment by the clinician. Suspected patients were then asked to get tested for COVID-19. Diarrhoea (6%), body ache (5%), cough (4%), headache (2.7%), fever (1%), Shortness of breath (1%), sore throat (0.7%), loss of smell/taste (0.3%), fatigue (0%), public dealing (5%), contact history with COVID-19 positive patient (0.7%), public gathering (0.7%), travel history (0.7%) and contact history with traveller (0.3%). Patients were then inquired inside the clinic. The percent of admittance was the following: diarrhoea (7.6%), body ache (14.3%), cough (8%), headache (4.7%), fever (5.3%), Shortness of breath (5%), sore throat (3.7%), loss of smell/taste (1.3%), fatigue (6%), public dealing (10.3%), contact history with COVID positive patient (2.3%), public gathering (2.7%), travel history (0.7%) and contact history with a traveller (0.7%), all of which carried significant p value of  $<0.001$ .

**CONCLUSION:** Number of patients admitting any symptoms and exposure increased inside the clinic as compared to triage outside, suggesting that patients have an underlying fear of barring to visit the consultant, denial towards COVID-19 presence and fear of being sent into isolation.



## 22. Bowel Preparation for Colonoscopy with Sodium Phosphate Solution versus Polyethylene Glycol-Based Lavage

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**BACKGROUND AND AIM:** Appropriate bowel preparation is the cornerstone for the detection of pathology during colonoscopy. The ideal preparation ensures proper visualization of colonic mucosa, should be tolerable and also in-expensive. Both oral sodium phosphate-containing and polyethylene glycol-based lavage are used predominantly as bowel cleansing modalities. Hence, we aim to assess the efficacy and tolerability of the two bowel preparation regimens for colonoscopy.

**METHODS:** Patients were randomized into two groups, Group 1; polyethylene glycol (PEG) (236gm in two-liter water in two divided doses) and Group 2 received sodium phosphate (NaP) (90ml in two divided doses). Gastroenterologists were blinded to the type of preparation. Efficacy was measured by using the Boston Bowel Preparation Scale (BBPS) scale. BBPS score of more than 6 was labeled as optimum preparation. Tolerability was assessed by the presence of symptoms like nausea, abdominal pain, vomiting, and abnormal taste.

**RESULTS:** In total 84 patients were included; 43 (51.2%) in Group1 (PEG) with mean age of  $45.08 \pm 13.5$  years. Majority were males; 45(53.6%) and mean BMI was  $22 \pm 3.9$  kg/m<sup>2</sup>. Colonoscopy was commonly performed for screening (30.9%), weight loss (26.2%), surveillance for Malignancy (15.4%), chronic diarrhea (14.3%) and constipation (13.1%). Median BBPS score was 7 and optimal bowel preparation was found in 62 patients. In 22 patients with BBPS < 6, majority (68.1 %) were in group2(p=0.047). Tolerability for solution was statistically significantly better in patients with PEG based preparatory solution (p=<0.001). Patients in group 2 had poor tolerability due to nausea; n=30 (p=0.005), altered taste; n= 36 (p=<0.001), vomiting; n=12 (p=0.11 ) and abdominal pain ;n=16 (p=0.15)

**CONCLUSION:** Polyethylene glycol-based lavage solution is more efficacious and well tolerable as compared to sodium phosphate containing colonoscopy preparatory solution.



### 23. Gamma-glutamyl transferase-to-platelet ratio (gpr) in predicting hepatic fibrosis in patients with chronic hepatitis c infection

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**INTRODUCTION:** Hepatic fibrosis is a precursor of cirrhosis in patients with chronic hepatitis of any etiology especially hepatitis C. The liver biopsy is the gold standard for the diagnosis of liver fibrosis, but because of its invasiveness, high cost, and lack of repeatability its use is limited. In recent times, efforts have been made to develop a simple, cheap, and noninvasive index to assess a patient's hepatic fibrosis, which could assist in early diagnosis to improve quality of life and patient's survival by giving timely treatment, delaying cirrhosis or incidence of liver cancer. A new model widely used these days for evaluating the grade of hepatic fibrosis is the gamma-glutamyl transferase (GGT)-to-Platelet ratio (GPR) and has shown great benefit in this regard. The aim is to evaluate the role of GPR as a noninvasive predictor of significant liver fibrosis in patients with chronic hepatitis C in our population

**METHODS:** All patients with chronic hepatitis C were included in the study after informed consent. The patient's baseline characteristics were recorded. The patient's baseline Complete blood count (CBC) and Liver function tests were also recorded. Patients then underwent Fibroscan liver to stratify the degree of fibrosis. These indices were used to calculate Gamma glutamyl transferase (GGT) /platelet ratio. Results were presented as means  $\pm$  SD for quantitative data or as numbers with percentages for qualitative data. Continuous variables were analyzed using the t-test or the Mann Whitney test; while categorical variables were analyzed using the Chi-square or the Fisher exact test. A p-value of  $<0.05$  was considered statistically significant.

**RESULTS:** A total of 35 patients were included in the study. Out of them, 24 (68.6%) were males and 11 (31.4%) were females. The mean age was 38.94 with SD  $\pm$  16.31. The baseline characteristics showed mean Hb of 10.2 with SD  $\pm$  2.11, TLC of 5.01 with SD  $\pm$  2.68, platelets of 107.6 with SD  $\pm$  72.4, INR of 1.25 with SD  $\pm$  0.19, serum creatinine of 2.2 with SD  $\pm$  3.87, Total Bilirubin of 4.2 with SD  $\pm$  9.62, ALT of 51.5 with SD  $\pm$  39.3, AST of 83.1 with SD  $\pm$  79.8, GGT of 81.1 with SD  $\pm$  85.3 and serum albumin of 3.2 with SD  $\pm$  0.61. The mean CTP score was 7.1 with SD  $\pm$  1.88 and MELD score of 14.03 with SD  $\pm$  6.98. Gamma-glutamyl transferase (GGT) /platelet ratio was calculated and a value of  $\geq 0.2$ , was found to be significantly associated with higher rates of liver fibrosis in patients with chronic hepatitis C with a p-value of 0.05. The area under ROC of GPR is 0.714. At a cutoff of  $\geq 0.2$ , the sensitivity, specificity, NPV, and PPV were 88.8%, 50%, 57.14%, and 85.71% respectively for GPR in predicting hepatic fibrosis along with diagnostic accuracy of 80%.

**CONCLUSION:** The role of GPR as a noninvasive predictor of significant liver fibrosis in patients with chronic hepatitis C in our population has been validated.



## 24. Point of care testing for SARS-COV-2 antibodies before doing endoscopy

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**OBJECTIVE:** COVID-19 has taken the world by storm, creating much disparity among both healthcar and non-healthcare centers regarding the provision of services. The purpose of our study is to see the utility of point of care serological testing in patients requiring endoscopy, already triaged based on history and examination, and seeing the prevalence of the SARS-COV-2 exposure in the asymptomatic patients undergoing the endoscopic procedure.

**METHODS:** In this prospective observational study patients undergoing endoscopic procedures during six months were included after taking informed consent. The patients already tested positive for COVID-19 by PCR were excluded. Patients were tested for IgG and IgM antibodies by immunochromatographic rapid serology test (ICT) using the patient's blood by the finger-prick method. Standard Operating Procedures for dealing with endoscopy patients during the COVID era were followed in all patients irrespective of antibody status.

**RESULTS:** The total number of patients included was 207; males were 120 (58%). The mean age was  $48.5 \pm 17.55$  (range 13 to 92). IgM turned out positive in 31 individuals (15%). IgG was positive in 41 (19.8%). Out of these, combined IgM and IgG positivity was seen in 24 (11.5%), IgM mono antibody positivity was seen in 7 (3.38%) and 17 (8.21%) of the study population tested positive for IgG only. 48 patients (23.18%) were positive for either antibody suggesting exposure to the COVID-19 virus. 15 out of 46 (32.6%) patients with chronic liver disease were positive for COVID antibodies compared to 33/162 (20.49%) of the non-CLD population ( $p=0.112$ ).

**CONCLUSION:** About one-fourth of the patients undergoing the endoscopic procedure was tested positive for COVID antibodies of which a significant percentage had chronic liver disease. It stresses the need of observing standard precautions to prevent the spread of infection during these procedures, especially in the vulnerable population.



## 25. Prevalence of gastroesophageal reflux disease in young adults: a population based-study in pakistan

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**INTRODUCTION:** Recent studies worldwide have accentuated the preponderance of Gastroesophageal Reflux Disease (GERD) among the younger age group; however, in Pakistan, a paucity of researches in context with the aforementioned matter exists. The primary purpose of the study was to discern the prevalence of GERD in the young adults of Karachi and their response towards its treatment. The study further determined the predisposition of GERD towards a particular gender, socioeconomic class, marital status, associated risk factor, and comorbidity, and also evaluated the usefulness of its treatment modalities.

**METHODS:** A transverse study was conducted in the city of Karachi, Pakistan. The sample population comprised of young adults aged 18-34, excluding pregnant females and non-permanent inhabitants. A questionnaire-based survey was conducted in which a verified and pre-tested questionnaire was employed by proficient interviewers to document the demographic details, symptoms in accordance to Carlsson-Dent questionnaire, associated comorbidities, risk factors, treatment choice, and its effectiveness in the study subjects. The data were analyzed using IBM Statistical Package for Social Sciences 25.0 (IBM Corp., Armonk, New York).

**RESULTS:** 31.4% (n=138) of the study population had GERD. Prevalence was more inclined towards the female gender, high socioeconomic class, and the unmarried ( $p<0.05$ ). An association of the prevalence of GERD was established with constipation and hypercholesterolemia ( $p<0.05$ ). The most popular mode of treatment was the utilization of home remedies to cure the symptoms (n=96, 69.6%); whereas, the most effective means to relieve the symptoms were found to be physician referral (87.7%).

**CONCLUSION:** It is manifest that the prevalence of GERD is on the rise in both the young and the old; therefore, it is incumbent upon the health sector to ameliorate their efforts to spread awareness in the general public regarding this enfeebling disease and endorse a healthy lifestyle and beneficial treatment plans.



## 26. Severity of acute viral hepatitis in patients with Glucose-6-phosphate dehydrogenase deficiency: A case-control study.

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**BACKGROUND/ AIM:** Viral hepatitis is known to be one of the significant causes of morbidity and mortality globally. In patients with glucose 6 phosphate dehydrogenase deficiency (G6PD), acute viral hepatitis may be associated with complications such as severe anemia, hemolysis, renal failure, hepatic encephalopathy, and even death. In this study, we will compare the parameters of morbidity and outcomes in patients of acute hepatitis with and without co-existing G6PD deficiency.

**MATERIAL AND METHODS:** Nine patients with acute viral hepatitis and diagnosed G6PD deficiency were compared with 27 matched control patients presented with acute viral hepatitis, from January 2012 to December 2018.

**RESULTS:** The patients with G6PD deficiency had a significantly raised mean total bilirubin levels as compared to controls (23.8 +/- 17.4 vs 10.0 +/- 8.8 mg/dl, respectively,  $P < 0.01$ ), Direct and indirect bilirubin levels were also significantly raised in patients with G6PD deficiency. Mean Hemoglobin levels were low in G6PD patients in comparison to the control group (12.0 +/- 2.6 vs 14.07 +/- 2.6 g/dl, respectively,  $P = 0.05$ ). Hemolysis was seen in 22.2 % of the G6PD group. Anemia was more prevalent in G6PD patients as compared to controls (66.7% vs 7.4%, respectively,  $P < 0.02$ ). Acute kidney injury in the G6PD group was significantly high as compared to the control group (55.8% vs 3.7%, respectively,  $P < 0.02$ ). Only one patient in each group required hemodialysis. The most common etiology was hepatitis A in both groups (66.7% vs 44.4%) followed by hepatitis E. The average duration of stay was prolonged in G6PD patients (9.1 +/- 12.2 vs 3.5 +/- 1.5 days, respectively,  $P < 0.05$ ). No significant difference was seen in symptoms, prothrombin time, liver enzymes, and outcome in both groups i.e. recovery was seen in both groups.

**CONCLUSION:** Acute viral hepatitis in patients with G6PD has a more severe clinical course due to complications leading to prolonged hospital stay but no difference was seen in the overall clinical outcome of patients.



## 27. Denovo juvenile hepatocellular adenocarcinoma

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**INTRODUCTION:** At Young age, hepatocellular adenocarcinoma is a rare malignancy. Denovo multicellular hepatocellular adenocarcinoma is even rarer in the young population. We present a case of a teenage male with hepatocellular adenocarcinoma managed at Dow University Hospital, Karachi.

**CASE SUMMARY:** A 14 years old boy with no underlying liver disease, presented with right hypochondriac pain and documented fever for 1 month. On examination, he had tender hepatomegaly with a liver span of 16 cm. There was no splenomegaly or clinical signs of ascites. Ultrasound abdomen gave an impression of large cavernous haemangioma in the liver. Triphasic CT scan abdomen revealed hepatoma measuring 10 cms in the right lobe of liver with few other small lesions. Serum alpha fetoprotein was 313.46 ng/ml. HBsAg and Anti HCV were non-reactive. He was referred to the Hepato-biliary surgical team for further management.

**TREATMENT:** Despite the large size and multiple lesions, since the underlying liver was normal and not cirrhotic, resection was a possibility. The patient underwent extended left hepatectomy. Post-surgery patient's Serum alpha-fetoprotein declined to 8.04 ng/ml after two weeks which was a favorable indicator for complete tumor resection. Excisional biopsy was suggestive of hepatocellular adenocarcinoma.

**FOLLOW UP:** The patient is in close follow-up and is doing well post-surgery. After ten months repeat triphasic CT scan showed a small lesion 0.7 x 0.4 cm in segment V with arterial enhancement but no definite washout on delayed phase. Serum Alpha-fetoprotein declined to 3.1 ng/ml and LFTs became normal. Repeat triphasic CT scan will be done after 3 months to monitor this lesion.

**CONCLUSION:** Hepatocellular adenocarcinoma though rare can occur in the normal liver of young individuals. Early timely evaluation of lesion leads to diagnosis at the curative stage. Although the tumor was large and multi-centric, we suggest that surgery should be considered as a favorable option if the tumor is confined to the liver.

## **28. To determine a correlation of the neutrophil to lymphocyte ration with the severity of liver cirrhosis measured by the child turcotte pugh score**

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**INTRODUCTION:** Cirrhosis is one of the leading causes of morbidity and mortality globally.

Patients with liver cirrhosis require frequent hospital admissions and follow-ups. (1) To determine disease severity, the most widely used scoring system i.e. Child- Turcotte Pugh Score (CTP) measures the clinical factors and synthetic liver functions. (2) The Neutrophil to Lymphocyte ratio (NLR) is an easily available, inexpensive, and simple measure to assess systemic inflammation and is independently related to poor clinical outcomes among liver cirrhosis patients. (3,4) This study aims to determine a correlation of the Neutrophil-to-Lymphocyte Ratio (NLR) with the severity of liver cirrhosis measured by the Child Turcotte Pugh score.

**MATERIALS AND METHODS:** This is a cross-sectional study of patients diagnosed with liver cirrhosis at the Gastroenterology clinics, at the Aga Khan University Hospital. The study will enroll 95 cirrhotic patients, regardless of the etiologic agent. CTP score would be fulfilled by using two methods, bilirubin, albumin, and INR; to be noted from the medical record registry. Encephalopathy will be determined on clinical assessment as per West Haven criteria. (5) Ascites will be determined as none, mild to moderate or severe according to a recent Ultrasound Abdomen.

**CONCLUSION:** This study would aim to establish whether the NLR correlates with the CTP score in determining the severity of liver cirrhosis thus proving to be a possible independent predictor of mortality in liver disease.



## 29. The spectrum of Liver Diseases in tertiary care hospital –Observation from GI and Liver disease outpatients

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**OBJECTIVES:** Liver diseases are associated with significant morbidity and mortality. Statistics about the prevalence of Liver diseases and health care resource provides important information for health care researchers. We aimed to describe the spectrum of liver and GI diseases presenting at tertiary care hospital in Karachi, Pakistan using data from the outpatient registry at Aga Khan University Hospital (AKUH).

**MATERIALS AND METHODS:** We have an established electronic database at the GI clinic, AKUH which comprises real-time data entry. The registry collects information about patient characteristics and the outpatient discharge diagnosis on all the patients who present to the GI clinics at AKUH. We present data on characteristics and liver disease burden in this paper.

**RESULTS:** Data contain information on 22,443 visits captured from January 2016 to December 2019 years, among these patients were 13,133,(50%) are liver disease, the mean age of the patients was 53.2 years (SD=15.3). On average, males younger as compared to females. In most of visits (50%)patients had liver disease such as hepatitis C (35%),hepatitis B (19%),other liver disease(16%),cirrhosis(7%),NASH(5%),NBNC(5%),hepatitis D (5%),HCC (4%),Autoimmune hepatitis(4%). The majority of the patients were females. As compared to males, a higher percentage of females reported liver disease.

**CONCLUSION:** Two main reasons for visits to GI outpatient clinics are Liver disease which is increasing day by day. These statistics can help the allocation of health care resources and plan for preventive measures.

### **30. Non-surgical management of esophageal perforation and fistulae- 9 cases managed conservatively in pakistan**

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**INTRODUCTION:** Esophageal perforation, spontaneous or iatrogenic, is considered a potentially life-threatening emergency and poses serious challenges in managing a medical condition. Esophageal perforation during surgery or endoscopy is a devastating complication resulting in significant morbidity with pneumomediastinum, pneumothorax, subcutaneous emphysema, sepsis. There is significant mortality, ranging from 12% to 50%, associated with the operative repair of perforation.

Surgical and conservative approaches are both characterized by considerable morbidity and mortality. The application of self-expanding covered metallic stents offers an alternative treatment. These resulted in rapid leak occlusion, provided an opportunity for early oral nutrition, and were noted to significantly reduce hospital length of stay, being removable they avoided the potential morbidity of operative repair.

The availability of self-expandable covered metallic stents in Pakistan has provided us with an alternate way to the traditional methods to manage oesophageal perforations. In the case series, endoluminal esophageal stent placement was found to be an effective method for the treatment of acute, iatrogenic perforations of the intrathoracic esophagus.

**METHODS:** Over a 18 month period, 9 patients found to have an esophageal perforation at a tertiary care medical center were offered endoluminal esophageal stent placement instead of operative repair of the esophagus as initial therapy. After informed consent, Self-expandable covered metallic stents were placed endoscopically utilizing general anesthesia and fluoroscopy. Adequate drainage of infected areas was also simultaneously achieved. Leak occlusion was confirmed by esophagram. Patients were followed until their stent was removed and their esophageal leak had resolved.

**CONCLUSION:** Self-expandable covered metallic stenting is a good alternative treatment option to surgical repair for esophageal perforation in experienced hands.



### 31. Transient elastography in chronic hepatitis b (chb) patients

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**INTRODUCTION:** Chronic hepatitis B virus infection (HBV) is considered a global public issue with more than 78,000 people per year dying of its evolution. Pakistan is in the intermediate endemic region, with an estimated carrier rate of 3%-5%. Assessing the fibrosis stage plays an important part in future decisions on the patients' wealth with available antiviral agents capable of preventing fibrosis passing to end-stage liver disease.

**METHODS AND MATERIAL:** An observational, cross-sectional study was conducted at the gastroenterology department, JPMC, Karachi, during the period from 1st December 2019 to 31st August 2020. Patients of any age, with documentation of chronic hepatitis B infection were eligible for inclusion in the study.

**RESULTS:** 54 patients were studied. The mean age was  $30 \pm 12.0$  years. 36 (66.7%) were male and 18 (33.3%) patients were female. Mostly, 31 (57.4%) patients had a normal score (5.3-7.1kpa) of fibrosis. 15 (27.8%) patients had F2 fibrosis, 07 (13.0%) patients had F3 fibrosis and 1 (1.9%) patients had F4 fibrosis.

25 Patients had a viral load of less than 2000 IU and among them, 15 patients had F1, 9 had F2 and 1 had F3 fibrosis. 8 patients had viral load between 2000 and 20000 IU and among them, 4 patients had F1, 2 patients had F2 and F3 fibrosis respectively. 30 patients had a viral load of greater than 20,000 IU and among them, 9 patients had F1, 8 patients had F2 and F3, and 5 patients had F4 fibrosis.

**CONCLUSION:** All patients with a diagnosis of CHB should be evaluated with TE and it should be available and cheap at all liver centers.

### 32. Complicated typhoid with cerebral edema, severe encephalitis and fungal infection of oral cavity- a case report

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**CASE REPORT:** A 16 year old male known case of epilepsy for 7 years (currently treated with carbamazepine) presented in emergency department with complains of high grade fever on and off for 1 month and altered level of consciousness(ALOC) for 1 day. Patient looked toxic with fever, hepatosplenomegally, desiccated tongue and palate coated with blackish white crusted material and GCS 13/15. Investigations showed leucopenia, neutropenia and thrombocytopenia. He was treated with hydration, paracetamol, ceftriaxone, levetiracetam (carbamazepine stopped due to marrow suppressive effects) and folate. During initial stay, the symptoms worsened starting from confusion towards visual hallucination, restlessness, insomnia with GCS 12/15 and continued fever spikes. Patient was given clonazepam and olanzapine based on the symptoms of delirium. CT scan head showed diffuse cerebral edema representing severe encephalitis. Lumbar puncture was not performed because of low platelet count despite the suspicion of HSV encephalitis due to neurologic symptoms with oral lesion. Blood C/S grew salmonella typhi; the antibiotic treatment was switched from ceftriaxone to azithromycin plus meropenem as per the culture sensitivity. The neurologic symptoms started to improve (GCS becoming 15), platelet and WBC count rose and fever subsided. Oral lesions were treated with scraping followed by application of triamcinolone gel mixed with miconazole gel due to suspicion of fungal infection from immunocompromised state secondary to typhoid. It showed dramatic improvement over next 3 days. The patient was discharged with an additional 7 day course of azithromycin, oral levetiracetam therapy with advice to follow up next week.

**SHORT DISCUSSION AND CONCLUSION:** Typhoid fever is one of the most highly prevalent infectious diseases in Pakistan.(1) It remains a major cause of morbidity and mortality due to atypical presentations and frequent development of complications.(2) Typhoid encephalopathy is a relatively common feature of enteric fever seen in upto 17% of patients however encephalitis per se with diffuse cerebral edema on CT scan and typhoid associated fungal infections are hardly if ever witnessed phenomena. (2)(3)(4)(5) These associated conditions if present may produce diagnostic uncertainties and therapeutic difficulties. This report represents a complicated case of typhoid that will help physicians consider a broader spectrum of typhoid symptoms that may come into a presentation.



### 33. The etiology of upper gastrointestinal bleeding

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**BACKGROUND:** Acute gastrointestinal (GI) bleeding is a potentially life-threatening abdominal emergency that remains a common cause of hospitalization.

The incidence of UGIB is approximately 100 cases per 100,000 population per year worldwide. Causes of UGIB vary according to geographic region and socioeconomic status. In western countries, approximately 45-60% of admissions for acute UGIB are due to peptic ulcers followed by esophagitis and esophageal varices. The reason for this study is that we need our data about the latest information frequency and etiology.

**METHODS AND MATERIAL:** Study design: Prospective, observational.

**Location:** Gastroenterology Department, Jinnah Post-graduate Medical Center.

**Duration:** 1st January to 30st September 2020.

Patients =18 years of either gender who were presented to us with complain of hematemesis, melena, or hematochezia. All patients underwent Esophagogastroduodenoscopy to determine the etiology of UGIB.

**RESULTS:** A total of 369 patients were enrolled in the study, 208 (56.4%) were male and 161 (43.6%) were female. The mean age was  $48 \pm 14.1$  years. Hematemesis 342 (92.7%) was the most frequent presenting symptom. The mean hospital stay was  $2 \pm 0.5$  days. Among these 369, 195 (52.8%) patients had Hepatitis C. 41 (11.1%) patients had diabetes, 29 (7.9%) had hypertension and 12 (3.3%) had IHD. There were 9 (2.4%) patients using NSAIDs, 23 (6.2%) were on anti-platelets, 2 (0.5%) were using herbal and homeopathic medicines. Variceal bleeding 276 (75%) was seen as the main reason for UGIB. A total 32 (8.7%) patients became died within 28 days of UGIB, some with recurrent episodes of bleeding and some with other complications of CLD.

**CONCLUSION:** Variceal bleeding was the most common cause of UGIB among our population. So it is necessary to screen every chronic liver disease patient for upper GI endoscopy to decrease the mortality and burden of hospitalization.



### 34. Case report on splenic artery pseudoaneurysm presenting as intermittent upper GI bleeding in a patient with alcoholic liver disease

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**BACKGROUND:** Splenic artery pseudoaneurysm is a very rare condition<sup>1,2</sup>. It is associated with acute or chronic pancreatitis, trauma, or it may be iatrogenic<sup>2</sup>. It is often a diagnostic challenge because of its varied presentation. Here we report the case of a young male known alcoholic with a history of acute pancreatitis followed by episodes of intermittent upper GI bleeding. He remained in a diagnostic dilemma for a few months. He was then diagnosed via CT abdomen and was treated with transcatheter embolization of the splenic artery

**CASE PRESENTATION:** A 34 years old male known alcoholic for about 10 years presented with, 5 months history of intermittent melena, hematochezia, and upper abdominal pain. His hemoglobin level dropped significantly during these episodes of GI bleeding. He had a history of multiple times hospitalization and packed cell transfusion. He remained in a diagnostic dilemma for many months. A thorough workup including multiple times EGDs and Cross-sectional imaging were done. Unfortunately, no cause to explain his recurrent GI bleeding could be determined. Then he came to our hospital. We initially did EGD which showed fundal varix with no signs of bleeding.

During the hospital course, the patient developed hematochezia. CT abdomen with the bleeding protocol was done. CT reported a small (5\*3mm) pseudoaneurysm of the Splenic artery. Features of acute pancreatitis and a few Small cysts were also found in the body of the pancreas.

The patient then underwent selective embolization of the splenic artery. Post-procedure patient remained hemodynamically stable. He also did not experience any further episodes of upper GI bleeding. He was then discharged home in stable condition. His hemoglobin has been static on subsequent outpatient follow up.

**CONCLUSION:** This young alcoholic male had acute pancreatitis followed by intermittent upper GI bleeding. His cause of intermittent upper GI bleeding was hemosuccus pancreaticus. He developed splenic artery pseudoaneurysm post pancreatitis which was causing intermittent upper GI bleeding.

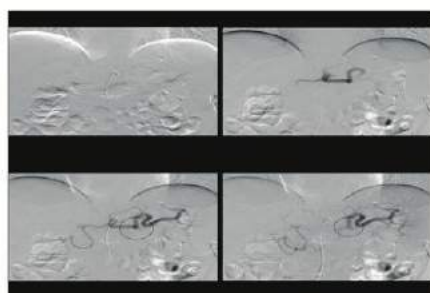


Figure 3: celiac artery angiogram images reveal progressive contrast enhancement of celiac axis

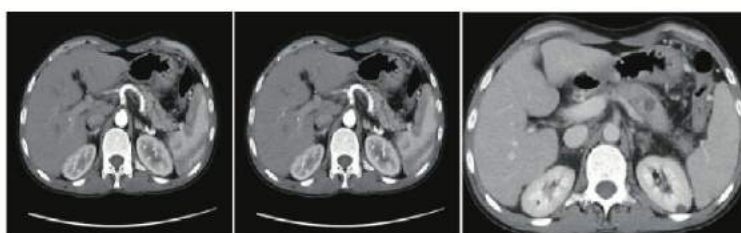


Figure 1: Axial CT image reveals changes of pancreatitis as evidenced by the presence of peripancreatic fluid and inflammatory changes and cystic changes within the body of pancreas

Figure 2: axial CT image in arterial-phase shows a contrast filled outpouching suggestive of Splenic artery pseudoaneurysm (encircled area)

Figure 3: celiac artery angiogram images reveal progressive contrast enhancement of celiac axis



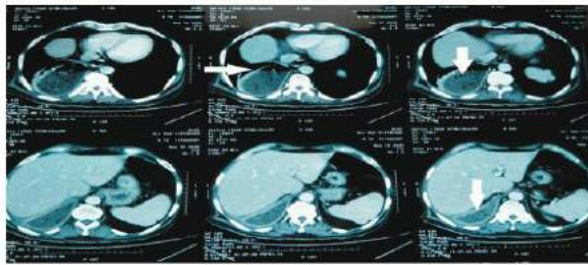
### 35. A Giant Esophageal Epiphrenic diverticulum causing dysphagia, fungal infection and aspiration pneumonia in an elderly patient. A case report.

Sabhita Shabir Shaikh, Raheela khalid

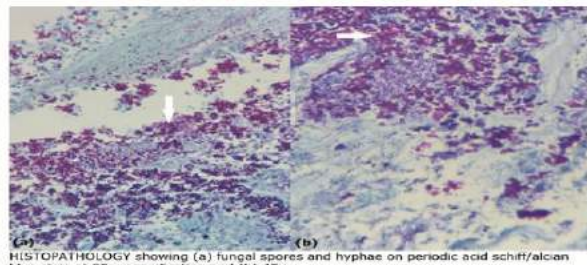
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**INTRODUCTION:** Epiphrenic diverticulum is a rare cause of dysphagia in the elderly population. Its incidence is 1 per 500,000 per year. There are case reports showing malignant changes in it and causing morbidity and mortality. We are reporting case of epiphrenic diverticulum causing dysphagia with superimposed fungal infection leading to aspiration pneumonia.

**CASE SUMMARY:** A 70 year male with no known co-morbidities presented to our endoscopy unit for upper GI endoscopy because of Dysphagia. On questioning he reported that he had progressive dysphagia for three months, associated with significant weight loss, cough productive of yellowish sputum and fever for last 2 weeks. On Examination he was mildly anemic; on chest examination he had decrease air entry on right mid-lower chest with no added sounds. Abdominal examination was unremarkable. Investigations showed hypochromic normocytic anemia. His sputum culture showed heavy growth of candida species. CT scan chest with contrast done showed an outpouching arising from distal dorsal esophagus 15.6 cm long and 0.9 cm neck, containing food particles causing compression and consolidation of adjacent lung segments.



CT scan chest with contrast showing A large out pouching seen arising from right posteromedial wall of distal dorsal esophagus starting at the subcarinal level with neck of 0.9 cm, containing food particles measuring 15.6 x 7.6 x 7.6 cm causing consolidation and collapse of adjacent medial and posterior segments of right lung.

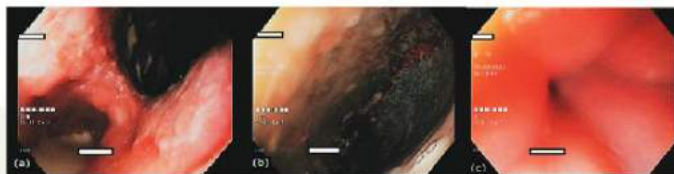


HISTOPATHOLOGY showing (a) fungal spores and hyphae on periodic acid schiff/alcian blue stain at 20x magnification and (b) 40x.

His upper GI endoscopy showed large diverticulum arising at 30 cm from incisors with overlying ulcerated and necrotic mucosa, causing compression of esophageal lumen however scope negotiated easily; on retroflexion fundus and GEJ (at 36 cm) appeared normal. Biopsy taken from diverticulum to rule out malignancy.

Biopsy report showed only fungal spores and hyphae with no evidence of dysplasia and malignancy. He was given antifungals and showed significant improvement of symptoms but considering huge size of diverticulum he was referred to thoracosurgeon.

**CONCLUSION:** Though rare but epiphrenic diverticulum can cause significant morbidity by causing dysphagia, regurgitation and aspiration pneumonia. It can, later on, develop malignancy so early diagnosis and appropriate management through conservative or surgical methods are crucial.



EGD: (a) showing both diverticular: opening on right side and normal esophagus on left side. (b) blind endophrenic diverticulum with overlying ulcerated and necrotic mucosa. (c) normal GEJ.



### **36. Lower GI Endoscopy-Indications and findings in a Tertiary Care Hospital Hyderabad/Jamshoro**

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**INTRODUCTION:** Colonoscopy is one of the most important diagnostic tools to assess the structural abnormalities of the large intestine and distal ileum. To date, there is a paucity of data in Pakistan on indications and findings of colonoscopy. Therefore, our study aimed to evaluate the indications and endoscopic findings of patients who underwent colonoscopy at a tertiary care hospital in interior Sindh, Pakistan.

**METHODS:** This prospective cross-sectional study of 125 patients who underwent lower GI endoscopy was conducted in the Endoscopy Unit of LUMHS Civil Hospital Hyderabad / Jamshoro from April 2020 to September 2020. To be eligible participants had to be 14 years or older, of either gender and giving informed consent. Data regarding demographic characteristics, indications, and endoscopic findings were gathered on a pre-designed proforma.

**RESULTS:** A total of 125 participants were recruited with a mean age of  $39 \pm 20$ , out of which 60% were males. Rectal bleeding was the most common indication (70.4%) followed by abdominal pain (9.6%), chronic diarrhea (8%), altered bowel habits (6.4%), constipation (2.4%), post-cancer surveillance (1.6%), weight loss, and anemia (0.8%) each. The most common colonoscopy findings were hemorrhoids (29.6%), normal (22.4%), and suspected tumor/growth (14.4%).

**CONCLUSION:** The most common indication in our study was per rectal bleeding with hemorrhoids as the most common endoscopic finding on colonoscopy.



### **37. Upper GI Endoscopy-Indications and findings in a Tertiary Care Hospital Hyderabad/Jamshoro**

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Liaquat University of Medical and Health Sciences Jamshoro/Hyderabad

**OBJECTIVE:** To document different indications and findings of upper GI Endoscopy in our endoscopy suite.

**METHODS:** A descriptive study of 500 patients who underwent UGI endoscopy was conducted in the Endoscopy Unit of PNS DRIGH LUMHS Jamshoro and Civil Hospital Hyderabad from April to September 2020. We analyzed demographic characteristics, indications, and endoscopic findings in patients.

**RESULTS:** We studied five hundred patients with a mean age of  $42.4 \pm 16.8$ , out of which 52.8% were males. Upper GI bleed was the commonest indication (33.2%) followed by dysphagia (21.6%), epigastric pain (10%), surveillance, and screening of varices (9% and 8.2% respectively). The most common endoscopic findings were esophageal varices (32.2%), gastritis (18.8%), and normal (11.4%). In patients with esophageal varices, 77.4% had chronic liver disease with positive serology for HCV and HBV in 63.4% and 23% respectively.

**CONCLUSION:** The most common indication was upper GI bleed with esophageal varices on endoscopy as the commonest finding. The underlying etiology of varices reflects the high burden of chronic liver disease due to viral hepatitis.



### 38. Microbial profile of biliary tract in patients undergoing ercp

Hina Ismail, Raja Taha Yaseen, Syed Mudassir Laeeq, Farina M Hanif, Zain Majid, Abbas Ali Tasneem, INasir Hasan Luck

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**INTRODUCTION:** The diagnosis and treatment of many pancreaticobiliary disorders require endoscopic retrograde cholangiopancreatography (ERCP). The Sterility of the bile duct is established by the flushing action of bile and the bacteriostatic effects of bile salts. Stasis /obstruction of bile flow can result in bacterial colonization of the biliary tree. The most common organisms that colonize are Gram-positive Enterococcus species, Gram-negative Escherichia coli and Klebsiella species, and Candida albicans. This study aims to establish the microbial profiles isolated from the bile samples and its role in selecting preemptive antibiotic therapy

**METHODS:** This is a cross-sectional study. Patients of either gender and age >18 years undergoing ERCP procedure for various biliary disorders were included in the study. Those patients having concurrent sepsis (other than due to cholangitis) or who had altered biliary anatomy due to previous hepatobiliary surgery or previous history of ERCP or failed bile aspiration were excluded from the study. The ERCP was performed after all duodenoscopes were disinfected and decontaminated according to the guidelines. After selective cannulation of the common bile duct using a guidewire in ERCP naïve patients, bile was aspirated before the injection of a contrast agent into CBD. All the data was recorded using SPSS version 20.0. The baseline characteristics of the patients were recorded. Continuous variables were expressed as mean and standard deviation while categorical variables including the presence of gram-positive, gram-negative organisms, multi-drug-resistant (MDR), and fungi in bile culture and their sensitivity to antibiotics were expressed as frequencies and percentages.

**RESULTS:** A total of 63 patients were included in the study. Out of them, 32 (50.8%) were females and 31(49.2 %) were males. The mean age noted was of 44.6 years  $\pm$  12.4 years. CBD stone was the most common etiology for which 35 patients (55.6%) underwent ERCP followed by distal bile duct stricture, which was noted in 25 patients (39.7%). The baseline characteristics showed mean Hb of 10.8 with SD  $\pm$  0.9, TLC of 10.2 with SD  $\pm$ 4.1, Total Bilirubin of 11.2 with SD $\pm$ 4.8, Direct Bilirubin of 9.1 with SD $\pm$ 3.5, AST of 29.5 with SD  $\pm$  14.9, ALT of 29.6 with SD  $\pm$ 8.9, Alkaline Phosphatase of 247.5 with SD  $\pm$ 204.5 and GGT of 244.7 with SD  $\pm$ 94.8. The bile Culture was extracted from the biliary tract. Bile C/S was positive in 53(84.1%) patients. Among them, 49 (77.8%) patients had age less than 60 years while 4(6.3%) patients had age above 60 years. In 49 patients (77.8%), a single organism was noted while 4(6.3%) patients had growth of multiple organisms. The most common organism noted in Bile CS was Escherichia coli, which was seen in 22 (34.9%) patients, followed by Pseudomonas aeruginosa in 14 (22%) and Klebsiella in 7 (11%) respectively. Out of 53 samples isolated,35(66%) were sensitive to Amoxicillin while sensitivity to Ampicillin, Ceftriaxone, Cefepime, Piperacillin/Tazobactam, Tigecycline and Imipenem was seen in 36 (67.9%),37(69.8%),37(69.8%),52(98.1%),52(98.1%) and 53(100%) respectively. The deranged liver enzymes AST, ALT, and ALK P at baseline were associated with positive bile culture with a significant p-value of 0.002,0.002 and 0.028 respectively.

**CONCLUSION:** The microbial profiles isolated from the bile culture and their sensitivity to antibiotics were noted.



### 39. Five Trend of hepatitis A in Outpatient Clinic- A Retrospective Study

Farheen I Hashmi, Masood Karim, Adeel Ur Rehman

**BACKGROUND:** Advancement and implementation of preventive measures in the community brought about significant improvement in hepatitis A prevalence in developed countries. The clinical spectrum of hepatitis A virus infection ranges from asymptomatic infection to fulminant hepatitis. The study aims to evaluate the change/improvement in Hepatitis A disease burden over a period of five years.

**MATERIALS AND METHODS:** A retrospective study was conducted at Aga Khan university hospital, Karachi, Pakistan from 2016-2019. Data obtained from the online hospital outpatient database comprised of 228 patients with a diagnosis of “Hepatitis A” adult ( 18 years or more) who visited the outpatient clinic. The trend of “Hepatitis A” patient clinic visit annual basis, patient demographic characteristics, and clinical manifestations were assessed and analyzed by SPSS version 21.

**RESULT :** Total 22,443 visits were retrieved from the online outpatient database from January 2016 to December 2019, the number of hepatitis A was a total of 288 patients. Year-wise 2016 (96), 2017 (62), 2018 (80), 2019 (50) among these patients were the hepatitis A patients were found in most young age group and there were 180(%) male and 108 (%)female, the mean age of 32.

**CONCLUSION:** Hepatitis A virus is still a major viral illness in our population. Our data suggest a slight improvement in the number of patients as compared to the previous year but still, it is not satisfactory. Further large scale survey needed for exact disease burden and its trend. However, based on recent facts and figures strict preventive measures are required in terms of good hygiene with proper sanitation but all effective vaccination program.

#### 40. Fibroscan findings in patients with fatty liver on ultrasonography

Nazeer Ahmed, Lubna kamani

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**INTRODUCTION:** Hepatic steatosis, or fatty liver disease, occurs due to the accumulation of lipids in hepatocytes. Early diagnosis is desirable because patients diagnosed in the early stage of the disease respond better to treatment. Ultrasound elastography studies the degree of deformation (stiffness) of an organ or lesion so that when there is hardening, fibrosis, or cirrhosis of the liver, those alterations are well demonstrated.

**OBJECTIVE:** To determine the fibrosis score of nonalcoholic fatty liver disease (NAFLD) in asymptomatic patients having fatty liver on ultrasonography at a tertiary care hospital, Karachi

**Subject & methods:** This was a cross-sectional, prospective study. All patients who fulfilled the inclusion criteria in the Department of Gastroenterology, Liaquat National Hospital, Karachi were included. After taking informed written consent, a brief history was taken followed by clinical examination, fibroscan was done to check steatosis & fibrosis in these patients. Chi-square test was used. P-value <0.05 was considered significant.

**RESULTS:** A total of 91 patients having fatty liver on ultrasound included. 53 patients (58.2%) were male with a mean age of 44.3187+11.575 years. The mean BMI, cholesterol, TG, HbA1c, ALT, steatosis and fibrosis score was 29.2848+4.878 kg/m<sup>2</sup>, 201.0714+68.911, 232.4474+128.092, 10.733+15.674, 66.1236+42.00, 291.8132+39.986, 8.2473+7.449 respectively. The most common co-morbid was DM seen in 17 patients (18.7%). The most common steatosis score was S3 in 36 (39.6%) & S2 in 33 (36.3%) while the most common fibrosis score was F0-1 in 35 (38.5%) followed by F0 in 13 (14.3%).

**CONCLUSION:** Fibroscan can be used as a screening method for patients suspected with NAFLD or patients without a clear indication for liver biopsy. Fibroscan allows a non-invasive method of assessment of hepatic steatosis in patients with NAFLD.



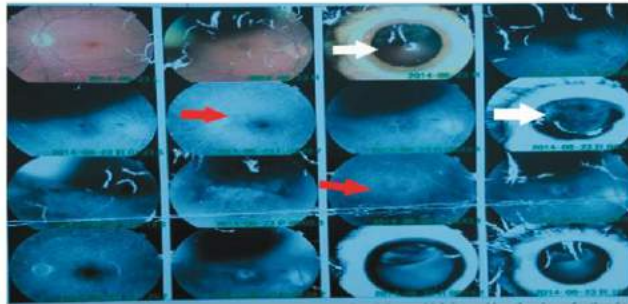
## 41. CHOROIDAL METASTATIC MELANOMA OF LIVER: A Case report

SS Shaikh, R Khalid

National Institute of Liver and Gastrointestinal Diseases, Dow University of Health Sciences, Karachi, Pakistan

**BACKGROUND:** Malignant melanoma is one of the skin tumors, which also arises from the uveal tract of the eyes. It metastasizes to lymph nodes, lungs, and gastrointestinal tract and the liver is the most common location for metastasis in the GI tract. Case Summary: The case is of 53 years old male presented with upper abdominal pain and weight loss for 6 months duration. He had right eye enucleation 5 years ago due to biopsy proven choroidal melanoma. Physical examination was unremarkable apart from mild tenderness on the right hypochondriac region.

On ultrasound abdomen, two hypoechoic mass lesions were seen at the junction of the right and left lobe of the liver. The largest one measures 6.9 x 5.6 cm and the other one measures 2.7 x 1.8 cm lesion suggestive of metastatic deposits. Triphasic CT abdomen showed heterogeneously enhancing lesion given the impression of hepatoma with no background of chronic liver disease. MRI was also done which has shown T2 Iso to hyperintense lesion giving differentials of focal nodular hyperplasia, hepatic adenoma, and fibrolamellar carcinoma.



Fundal fluorescein angiography showing large choroidal brown mass at superiotemporal region in right eye masking view of retina in that region (white arrow). Cystoid macular edema with retina haemorrhage along with leakage (Red arrow).

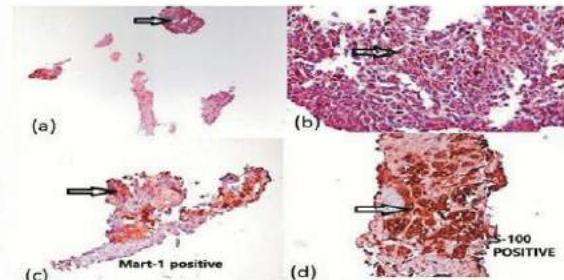


Figure 2 a,b,c,d: (a) Core of liver parenchyma with neoplastic cells at low magnification (arrow). (b) Higher magnification showing individual tumor cells containing melanin pigments (arrow). (c) Tumor cells showing mart-1 positive (Melanoma-associated antigen recognized by T cells) (arrow). (d) Tumor cells showing S-100 positive (arrow)

Due to discrepancy in imaging reports, the diagnosis remained grey, so a liver biopsy is done showing melanin-containing tumor cells with S-100 and MART-1 positive suggestive of melanoma. He was then referred to an oncologist for further management.



Fig 1: CT scan abdomen triphasic showing hypodense mass lesion in liver on portovenous phase (arrows).

**CONCLUSION:** As metastatic liver melanoma is very rare one should be very cautious while dealing with patients having a history of visual loss due to choroidal tumor and liver lesions, histopathology should be done without any delay and look for S-100 and MART-1 immunochemical stains to diagnose melanoma. So that early curative and definitive treatment could be given to the patient.



## 42. Assessing the knowledge of trainee residents for liver involvement and related issues in COVID-19 pandemic

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**Introduction:** We assessed the knowledge of internal medicine and gastroenterology trainees regarding liver involvement and related issues in the current COVID-19 pandemic.

**METHODS:** This online survey comprised of 10 questions designed to examine the basic knowledge of the Sars-Cov-2 virus, knowledge regarding liver involvement in COVID-19, and the ability to decide on patient care.

**RESULTS:** A total of 100 responses were collected. Most of the responses were from Pakistan (n=75). More than 80% of trainees responded correctly regarding the accurate indication of endoscopic procedures during COVID-19 pandemic, absence of ACE-II receptor expression on astrocytes, upper respiratory secretions being an eligible sample for SARS-COV-II, avoiding regular outpatient follow up, avoiding hydroxychloroquine as a prophylactic drug, and azithromycin in decompensated cirrhosis, continuing beta-blockers and lactulose in a decompensated patient, melena being an accurate indication for screening endoscopy and the choosing right set of PPEs. Less than 50% of responders knew correctly regarding NAFLD being a notorious factor for COVID-19 related complications, ACE-II receptor expression by cholangiocytes and enterocytes, saliva and stool being an eligible sample for SARS-COV-II detection, palliative approach as an appropriated management step for decompensated-CLD patients, and history of ascites as an appropriate indication for screening endoscopy. GI trainees performed better in some areas of knowledge

Questions	CORRECT ANSWERS GIVEN		Correct answers	P-value
	GI (n)	I-Medicine (n)		
Which of the following indications does not require endoscopic intervention during the COVID-19 pandemic?				
1. Acute GI bleeding	47	40	No	0.071
2. Surveillance endoscopic procedures	44	39	Yes	0.287
3. Access for urgent feeding	47	47	No	1.000
4. Biliary sepsis	47	41	No	0.121
5. Diagnostic EUS	34	21	Yes	0.002*
6. Routine diagnostic endoscopic procedures	43	37	Yes	0.211
Patients with liver disease secondary to which of the following etiology are most prone to develop COVID-19 related complications?				
1. Cirrhosis secondary to HBV/HCV	24	21	No	0.688
2. NAFLD (nonalcoholic fatty liver disease)	13	4	Yes	0.031*
3. Chronic HCV without cirrhosis	0	2	No	0.495
4. HBV carrier	0	0	No	1.000
5. Hepatocellular carcinoma	13	23	No	0.060
It is now recognized that SARS-COV-2 enters a cell through ACE-II receptors. These receptors are expressed abundantly on which of the following cells?				
1. Hepatocytes	25	28	No	0.689
2. Cholangiocytes	14	7	Yes	0.140
3. Astrocytes	48	50	No	0.495
4. Alveolocytes	39	35	Yes	0.495
5. Enterocytes	17	11	Yes	0.265
SARS-COV-2 can be detected by running RT-PCR on which of the following samples				
1. Saliva	18	26	Yes	0.158
2. Respiratory secretions	47	41	Yes	0.121
3. Blood	36	37	No	1.000



4. stool	23	15	Yes	0.149
5. Urine	47	45	No	0.715
In the current situation what advice you would give to a patient after a liver transplant?				
1. Frequent CPU follow ups for a regular checkup	44	49	Yes	0.259
2. Wear mask and gloves when shopping at a departmental store	32	39	Yes	0.275
3. Start prophylactic <u>hepatic</u> <u>hydrocortisone</u>	50	48	No	0.456
4. Observe strict social distancing	49	43	Yes	0.050
5. Stop Mycophenolate if being given as a second drug with tacrolimus	37	44	No	0.136
In current COVID-19 pandemic a cirrhotic patient with past history of <u>ascites</u> and <u>bleeding varices</u> contacts you for surveillance endoscopy, what advice would you give?				
1. Postpone the procedure	36	34	Yes	0.828
2. Get endoscopy as scheduled	36	34	No	0.020
3. Continue beta blockers	49	24	Yes	0.002*
4. Stop diuretics	49	47	No	0.017
5. Stop lactulose as it may alter gut flora and promote SARS-COV-2 cell entry	50	49	No	1.000
A decompensated-CID patient was hospitalized and was later found to have COVID-19. Now the patient is developing respiratory distress, what steps would you take for its management?				
1. Intubate and ventilate	32	29	No	0.541
2. Palliative care	37	17	Yes	<0.001*
3. Perform CPR if the patient develops <u>apnoea</u>	46	47	No	1.000
4. Counsel the family regarding poor prognosis	44	41	Yes	0.577
5. Start azithromycin	39	44	No	0.207
Performing an endoscopic procedure on a patient with unknown COVID-19 status, which of the following set of <u>PPEs</u> would you use?				
1. Surgical mask, gloves, and goggles	0	0	No	1.000
2. N95 mask, gloves, and goggles	0	0	No	1.000
3. N95 mask, gloves, headcap, face shield, shoe cover and gown	2	3	No	1.000
4. Surgical mask, gloves, goggles, head cover, face shield, shoe cover and gown	0	2	No	0.456
5. N95 mask, gloves, goggles, headcap, face shield, shoe cover and gown	49	45	Yes	0.436
In current COVID-19 pandemic, to which of the following patients you would advised screening endoscopy?				
1. Patients with history of <u>melena</u>	45	44	Yes	0.260
2. Patient with <u>ascites</u>	13	6	Yes	0.126
3. Patient with <u>haemoglobin</u> counts of 140,000/ $\mu$ l	47	47	No	1.000
4. Patient with serum albumin of 2.9 g/dl	50	45	No	0.242

**CONCLUSIONS:** Trainees were updated in many aspects of the recent guidance in the management of COVID-19 but there were many lacunae in the knowledge. So, continuous medical education activities are essential to keep the residents updated about the changing developments in the management of COVID-19.

### **43. Mesenchymal Hamartoma of Liver in Fourteen Months Old Girl- A Case Report**

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**ABSTRACT:** We report a fourteen-month old female with history of abdominal distension for two months. She presented to the outpatient department having massive abdominal distension and hepatomegaly. Abdominal scan showed a cystic liver lesion. She was initially diagnosed as liver abscess and admitted to pediatric ward. All baseline investigations including liver aspirate, culture and staining did not reveal any infectious etiology. Patient did not respond to the empirical antibiotics and abdominal distension continued to increase during the hospital stay. Patient was referred to pediatric gastroenterology department. A pigtail catheter was inserted in the liver cystic swelling, and upto 200ml/24 hour aspirate was drained via catheter daily. Further workup and ultrasound guided biopsy showed solid cystic liver mass. Patient was operated for the liver mass and biopsy revealed mesenchymal hamartoma.



#### 44.Measurement of spleen stiffness using Transient Elastography for the prediction of esophageal varices in cirrhotic patients

Rani Tulsi, Muhammad Manzoor Ul Haque, Muhammad Fareed Iqbal, Farina M Hanif, Asha Devi, Nasir Hassan Luck

Department of Hepatogastroenterology Sindh Institute of Urology and Transplantation

**INTRODUCTION:** Prediction of EVs by the measurement of splenic stiffness (SS) by Transient elastography (TE) in cirrhotic patients has been recently proposed. Splenomegaly and splenic stiffness in cirrhosis can be explained by enlargement and hyper activation of the splenic lymphoid tissue, passive congestion, increased angiogenesis, and ?rogenesis due to portal hypertension.

**AIMS:** Thus, the aim of this study is to assess the diagnostic accuracy of spleen stiffness as a non-invasive predictor for the presence of esophageal varices in liver cirrhosis using EGD as gold standard. Spleen stiffness measurement is non-invasive technique as compared to EGD so this test can be used to stratify the liver cirrhotic patient who need screening EGD compared those who do not need it.

**METHODS:** All patient with cirrhosis undergoing screening EGD were offered to participate in the study. After fulfilling the inclusion criteria, a blood sample for platelet count, INR, CTP and MELD score was taken and splenic stiffness was measured by Transient Electrography. ROC curve were plotted between APRI, FIB4, spleen size and splenic stiffness for the prediction of esophageal varix considering EGD as gold standard test for it diagnosis.

**RESULTS:** Total of 140 patients were included in the study, mean age of patients was  $40.74 \pm 14.3$ , predominantly were males 94 (67%), while 75 (53.6%) belonged to urban areas. Common etiologies for cirrhosis includes HCV 65 (46.4%) followed by HBV 24 (17%), HBV and HDV coinfection 21 (15%), Autoimmune hepatitis 8 (5.7%), Wilson's disease 2 (1.4%) and others were 11 (7.9%). Most patients belonged to CTP class A 7 (55%). Mean MELD score was  $11.8 \pm 5.2$ . Mean platelets and albumin of patients were  $117.1 \pm 80.4$  and  $3.2 \pm 0.7$  respectively, 37 (26.4%) had ascites. Esophageal varices were found in 84 (60%) and 7 (5%) patient had fundal varix. Student t-test showed a significant association of low platelets ( $p=0.0001$ , 84.3 vs 166.4) and high splenic stiffness ( $p=0.0001$ , 48.4 vs 24.6) with the presence of esophageal varices. Area under ROC for the prediction of esophageal varix by using APRI, FIB-4, spleen size and splenic stiffness were 0.77, 0.73, 0.75 and 0.86 respectively.

**CONCLUSION:** Splenic stiffness highly reliably in predicting the presence of esophageal varices as compare to other noninvasive tests like APRI, FIB-4 and spleen size. So it can be used to stratify the patient who needs screening EGD and minimize the false negative results.

#### 45. Utility of BE3A score in predicting the outcome of HCV related decompensated cirrhosis treated with direct antiviral therapy

Nishat Akbar, Abbas Ali Tasneem, Nasir Hassan Luck

**BACKGROUND AND AIMS:** Untreated decompensated hepatitis C (HCV) related to chronic liver disease (CLD) leads to poor outcomes due to the associated complications. This study aimed to ascertain the utility of BE3A score in predicting the outcome of patients with HCV CLD treated with direct-acting antiviral agents (DAA).

**METHODS:** All patients with decompensated HCV CLD and detectable serum HCV ribonucleic acid (RNA) were treated with DAAs: Sofosbuvir, Daclatasvir/Velpatasvir, and Ribavirin for 6 months. Demographic features, Child Turcotte Pugh (CTP), and BE3A (Body mass index, Encephalopathy, Albumin, Ascites, Alanine aminotransferase) scores were recorded before and after DAA therapy.

**RESULTS:** A total of 65 patients were included in the study of which 33 (50.8%) were females. Mean age was 50.1 ( $\pm 8.91$ ) (range 32 – 76) years. Most of the patients 50 (76.9%) received the Sofosbuvir/Daclatasvir/Ribavirin combination. The CTP score of patients before start of DAAs was B in 58 (89.2%) [B7: 24, B8: 22, B9: 12] and C in 7 (10.8%) [C10: 5, C11: 2]. A total of 27 (41.5%) patients' CTP score was reduced to A (A5: 4, A6: 23) after 6 months of treatment with DAAs. The BE3A scores before start of treatment were (0 (1), 1 (13), 2 (27), 3 (20), 4 (3), 5 (1)). A BE3A score of  $\geq 3$  was associated with a drop in CTP score to A5 or A6 with DAA treatment ( $p=0.009$ ).

**CONCLUSION:** BE3A score is useful in predicting the outcome of patients with decompensated hepatitis C-related chronic liver disease. A BE3A score of 3 or more may indicate a likelihood of a reduction in CTP score from B or C to A.



## **46- Fulminant Hepatic Failure Etiology, Clinical Manifestations, and Outcome: An Experience of Tertiary Care Hospital of Karachi, Pakistan.**

### **AUTHORS:**

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**KEYWORDS:** Fulminant Hepatic Failure, Etiology, Clinical Manifestations, Outcome, Karachi, Pakistan

**AFFILIATION:** 1. Gastroenterology Department, Jinnah Postgraduate Medical Centre, Karachi, Pakistan. 2. Medical Unit II, Dow University of Health Sciences, Ojha Campus, Karachi, Pakistan.

**OBJECTIVE:** The study was aimed to determine the etiology, clinical manifestations, and outcome associated with Fulminant hepatic failure (FHF)

**MATERIALS AND METHODOLOGY:** A cross-sectional study was conducted at the Department of Gastroenterology, Jinnah Postgraduate Medical Centre, Karachi, Pakistan from January 2018 till to date. All patients of both gender  $\geq 16$  years were recruited and investigated for acute viral serology, complete blood count, liver function tests, renal function tests, serum creatinine, MELD score parameters and King's college criteria (KCC) parameters.

**RESULTS:** Total 71 patients were enrolled, out of which 46 (65%) were males and 25 (35%) were females with a mean age of  $28.03 \pm 7.85$  years. Hepatitis E was found to be the most common cause of FHF 39 (55%). Sixty two (87%) of patients died and 9 patients recovered and were discharged symptom free. Variables i.e. presence of viral hepatitis E, serum creatinine  $>2.5$  mg/dl, and sepsis were found to have significant association with mortality on linear correlation. Only serum creatinine more than 2.5 mg/dl and development of sepsis were found to predict the outcome after multivariate analysis. The KCC criteria cut off point was reached in a total of 56 patients (out of 71) of which 51 patients died.

**CONCLUSION:** The mortality rate of FHF is very high which can be reduced to some extent in a non-liver transplant areas by controlling the risk factors associated with poor outcome.

## **47- Covid 19 associated liver injury: clinical manifestations, challenges and outcome: a real life experience from pakistan**

Lajpat Rai1

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**OBJECTIVE:** The study was aimed to determine the clinical manifestations, challenges, and outcome associated with Covid 19 associated liver injury.

**MATERIALS & METHODS:** This observational study was conducted on all admitted patients of COVID-19 PCR positive at corona isolation ward & ICU. A total of 103 patients were evaluated (n = 62 from ward and n = 41 from ICU). Statistical analysis was performed to compare clinical manifestations, challenges, and outcome associated with Covid 19 associated liver injury among these groups.

**RESULTS:** A total of 74 (71.84%) patients had liver injury during hospitalization. Mean age of patients admitted in ICU  $59.21 \pm 6.33$  was higher than those admitted in ward  $47.21 \pm 7.01$  years (p 0.002). Fever, right hypochondrial pain, and diarrhea significant clinical manifestations in patients admitted in ward while shortness of breath, fatigue, and cough were predominant in patients admitted in ICU (p 0.001). Mean AST ( $51.90 \pm 10.44$  IU/L) and indirect bilirubin ( $2.90 \pm 0.91$  IU/L) levels significantly higher in patients admitted in ward while gamma glutamyl transferase ( $78.16 \pm 1.38$  IU/L) levels were significantly deranged in patients admitted in ICU (p = <0.05). A total of 12/41 patients (29.26%) died admitted in ICU. Increased mean age, presence of SOB at presentation, and raised gamma glutamyl transferase were independent predictors of increased mortality in patients with COVID-19 (p=0.001).

**CONCLUSION:** Multiple clinical and non-clinical factors associated with poor outcome in patients admitted in ICU with COVID-19 associated liver injury.

**KEYWORDS:** COVID-19, Liver Injury, Mortality, Pakistan

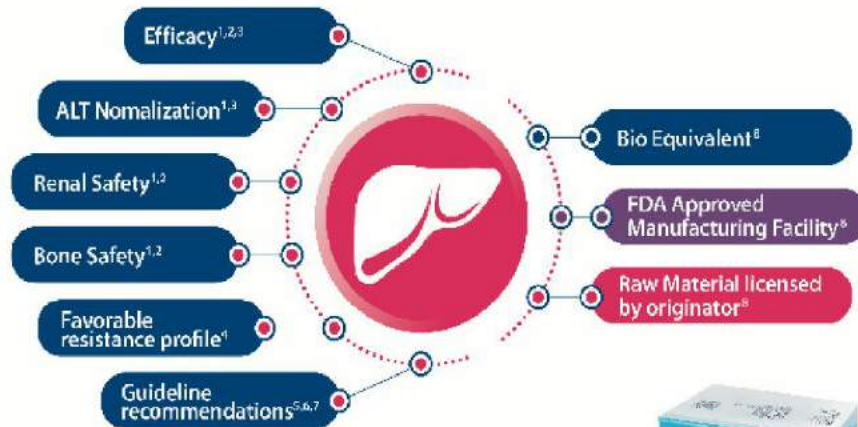




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