PSSLD Webinar on ‘The Gut-Liver Axis’

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World Gastroenterology Organization (WGO) has selected the ‘Gut Microbiome’ as the focus of the 2020 World Digestive Health Day (WDHD) campaign. The objective of choosing this theme is to increase the awareness of the role of the gut microbiome in health and modulation of different diseases. 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. “There are a lot of developments in the basic and clinical research in the gut microbiome. While the official date of WDHD is 29 May 2019, the imitative taken by WGO and related activities will continue throughout and beyond the campaign year”. 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’. “We are not alone in our bodies. Living inside every person is trillions of microorganisms. The gut bacterial microbiota is comprised primarily of 4-5 main phyla including Firmicutes and Bacteriodetes. 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 microbiome with the host is mostly indirect and is mediated by their metabolic products, also called postbiotics, that are released during food fermentation. Vast differences exist between the microbiomes of apparently healthy people. Dysbiosis is an alteration in the microbial community that results in decreased diversity and numbers of commensal bacteria. Studies suggest a relationship between gut dysbiosis and chronic health conditions such as inflammatory bowel disease, metabolic syndrome, cardiovascular disease, obesity, and cancer.

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 discussed the crosstalk between bile acids and gut microbiota and the role of the farnesoid X receptor (FXR)
Prof. Wasim Jafri, from Aga Khan University and Director WGO Karachi Training Center introduced the next key speaker, Prof. Eamonn Quigley. Prof. Quigley chairs the Lynda K and David M Underwood Center for Digestive Disorders, Houston Methodist Hospital, Houston, Texas. He 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 bloodstream. He threw light on the altered gut microbiota in chronic liver disease and a role in hepatic encephalopathy. He said that small intestinal bacterial overgrowth was common in chronic liver disease patients and intestinal microbiota on admission predicted the risk for extra-hepatic organ failure, acute on chronic liver failure, and death. The gut microbiome has a role in acute rejection after transplantation, acetaminophen-induced hepatotoxicity, acute liver injury, hepatocellular carcinoma, primary sclerosing cholangitis, and non-alcoholic and alcoholic fatty liver disease. “In patients with cirrhosis and NAFLD the gut microbiota profile and systemic inflammation are significantly correlated and can concur in the process of hepatocarcinogenesis”, he added.

Professor Masood Siddiq, Past President PSSLD introduced the next speaker, Prof. Jasmohan Bajaj. He is Professor of Medicine, Virginia Commonwealth University and Richmond VA Medical Center USA; and, a member of the WDHD 2020 Steering Committee. He discussed ‘Therapies Targeting the Gut-Liver Axis’. Dr. Bajaj said, “currently available therapies are prebiotics, probiotics, postbiotics, synbiotics, lactulose, rifaximin, and modified diets while emerging therapies are a fecal microbial transplant, phage therapy and precision changes in the microbiota”. 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 including Prof. Cihan Yurdaydin, Past President and Chair of Nominations WGO, and Prof. Kadir Docmeci, Past President Asian Pacific Association for the Study of Liver Diseases (APASL).