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Speakers

Title: View of the non-alcoholic fatty liver in non-obese patients from maflD perspective

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A novel concept consensus by an international panel of experts recommended a change in name for NAFLD to metabolic (dysfunction) associated fatty liver disease (MAFLD). The new definition is a landmark in hepatology bringing a new way of thinking about diseases of the liver that are associated with fat deposition and metabolic dysfunction. Importantly, this "MAFLD definition" avoids the dichotomous view of NAFL and NASH, since it is based in "positive" criterion (evidence of hepatic steatosis) instead of "negative" criterion hard to exclude. Lean NAFLD is defined as hepatic steatosis with a BMI <25 kg/m² in non-Asian people or BMI <23 kg/m² in Asians.

Main Text: At present, it is not possible to define a phenotype of Metabolic Healthy Obesity (MHO) due to the lack of consensus. This disparity is due to the difference in defining metabolic health found by some authors when studying the phenotypes of subjects with unhealthy metabolic weight. We generally associate the development of NAFLD Patients with Obesity, but in opposition to this, READ patients can also develop this disease, especially when we find visceral obesity associated with a strong genetic predisposition and an altered and unhealthy diet pattern.

Here is the importance of addressing important concepts such as metabolic unhealthy normal weight, MUHO, MHO, as well as the interrelationship that all of them have with the distribution of body fat.

For this reason, for the sake of understanding and finding a clinical-pathophysiological relationship of the disease, I try to follow a route which helps me to better understand said relationship of importance in the study of Metabolic Association of Fatty Liver. It is essential to start from the term MAFLD which follows 2 routes, one in obese patients and the other in non-obese patients.

Conclusion: Adequate understanding of the spectrum of MAFLD in association with non-obese NAFLD constitutes a new line of research which would provide a better and more exhaustive understanding of the relationship between metabolic dysfunction and fatty liver disease, especially in non-obese patients in any of It would be necessary to delve further in non-Asian patients to establish a better characterization of the disease. In another order, it is very important to establish clinical criteria in correlation with the pathophysiological pathways of the disease. This will allow a greater approach and management of the patient with this type of condition, giving us benefits beyond the simple understanding that until now we have had about the fatty liver.

Biography

1st Degree specialist in Family Medicine, Master in Bioethics from the "San Vicente Martir" University of Valencia. Diploma in Internal Medicine. Member of the Global Liver Institute and the American Liver Foundation. Member of United European Gastroenterology, Board Member of Acta Scientific International Open Library and International member of Chang Gung Medical Education Research. Am Lecturer of Medical University of Villa Clara.

Title: Risk profile of NAFLD: Prevention and amelioration through lifestyle changes

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Non-alcoholic fatty liver disease (NAFLD) is emerging as the most frequent chronic liver disease worldwide, with a prevalence of 32% which is considerably higher than previously estimated and it continues to rise at a disturbing rate. Its meteoric rise is paralleled only by obesity and type 2 diabetes. Broadly, NAFLD can be classified into two major subtypes, namely, non-alcoholic fatty liver (NAFL) which displays simple steatosis with a more benign course, and non-alcoholic steatohepatitis (NASH), a more progressive disease with a large inflammatory component, which is a precursor to fibrosis, hepatocyte damage, ballooning, cirrhosis, and hepatocellular carcinoma. Although diagnostic parameters are available, NAFLD often remains undiagnosed for extended periods of time. Currently accepted risk factors for the development of NAFLD are dysregulated lipid metabolism, insulin resistance, inflammation, ER stress and obesity. Empirical data suggests that increased visceral adipose tissue (VAT) is an important feature of NAFLD in obese as well as non-obese individuals. Specific adipokines secreted from the VAT are known to mediate the metabolic dysregulation seen in NAFLD. Central obesity is deeply enmeshed with type of diet, activity pattern and meal timings. A diet with overall reduction in carbohydrates and increased fiber content, eaten with a window of 8-10 hours gives liver the time to rejuvenate aided by the release of relevant hormones. The excess fat received or synthesized under the influence of insulin, is then packaged and exported as VLDL preventing the accrual of fat in hepatocytes. Another important but unappreciated risk factor for metabolic disorders like NAFLD is chrono disruption or circadian misalignment due to altered sleep wake cycle, meal timings and exercise, that leads to an array of metabolic abnormalities like insulin resistance, obesity, dysbiosis and liver dysfunction.

Biography

I completed Ph.D. in Biochemistry in lipoprotein metabolism from All India Institute of Home Economics, New Delhi. I have been teaching Biochemistry to undergraduate and postgraduate students in the University of Delhi, India, for the past 25 years. I have published research articles in the areas of lipid and lipoprotein metabolism, adipokines, NAFLD and cancer biology.

Title: Pathophysiology and management of “Esophageal Varices” in current practice

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Esophageal Varices: Esophageal varices are dilated submucosal distal esophageal veins connecting the portal and systemic circulations. This happens due to portal hypertension (most commonly a result of cirrhosis), resistance to portal blood flow, and increased portal venous blood inflow. The most common fatal complication of cirrhosis is variceal rupture; the severity of liver disease correlates with the presence of varices and risk of bleeding. Bleeding esophageal varices: No single treatment for bleeding esophageal varices is appropriate for all patients and situations. An algorithm for management of the patient with acute bleeding is presented in this article. The options for long-term, definitive therapy and the criteria for selection of each are discussed. Pathophysiology and management of esophageal varices: Esophageal varices are one of the most common and severe complications of chronic liver disease. New aspects in epidemiology, pathogenesis, and treatment of varices are reviewed. Sclerotherapy is the first-line treatment for acute hemorrhage. Prevention of first or recurrent bleeding is still unsatisfactory. β -Blockers are slightly superior to sclerotherapy regarding prophylaxis of first bleeding. β -Blockers or sclerotherapy may be used for prophylaxis of recurrent bleeding. However, prophylactic treatment regimens do not have a major impact on survival. Combination treatment, new drugs, or new devices may help to improve the efficacy of prophylactic measures. Endoscopic Therapy for Esophageal Varices: Among therapeutic endoscopic options for esophageal varices (EV), endoscopic variceal ligation (EVL) has proven more effectiveness and safety compared with endoscopic sclerotherapy and is currently considered as the first choice. In acute EV bleeding, vasoactive therapy (either with terlipressin or somatostatin) prior to endoscopy improves outcomes; moreover, antibiotic prophylaxis has to be generally adopted. Variceal glue injection (cyanoacrylates) seems to be effective in the treatment of esophageal as well as in gastric varices. Prevention of rebleeding can be provided both by EVL alone or combined with non-selective β -blockers. Moreover, EVL can be adopted for primary prophylaxis, with no differences in mortality compared with drugs, in subjects with large varices and unfit for a β -blocker regimen.

A meta-analysis of endoscopic variceal ligation for primary prophylaxis of esophageal variceal bleeding: Despite publication of several randomized trials of prophylactic variceal ligation, the effect on bleeding-related outcomes is unclear. We performed a meta-analysis of the trials, as identified by electronic database searching and cross-referencing. Both investigators independently applied inclusion and exclusion criteria, and abstracted data from each trial. Standard meta-analytic techniques were used to compute relative risks and the number needed to treat (NNT) for first variceal

Title: Pathophysiology and management of “Esophageal Varices” in current practice

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bleed, bleed-related mortality, and all-cause mortality. Among 601 patients in 5 homogeneous trials comparing prophylactic ligation with untreated controls, relative risks of first variceal bleed, bleed-related mortality, and all-cause mortality were 0.36 (0.26-0.50), 0.20 (0.11-0.39), and 0.55 (0.43-0.71), with respective NNTs of 4.1, 6.7, and 5.3. Among 283 subjects from 4 trials comparing ligation with β -blocker therapy, the relative risk of first variceal bleed was 0.48 (0.24-0.96), with NNT of 13; however, there was no effect on either bleed-related mortality (relative risk [RR], 0.61; confidence interval [CI], 0.20-1.88) or all-cause mortality (RR, 0.95; CI, 0.56-1.62). In conclusion, compared with untreated controls, prophylactic ligation reduces the risks of variceal bleeding and mortality. Compared with β -blockers, ligation reduces the risk for first variceal bleed but has no effect on mortality. Prophylactic ligation should be considered for patients with large esophageal varices who cannot tolerate β -blockers. Subsequent research should further compare ligation and β -blockers to determine the effect on mortality, and measure ligation's cost-effectiveness

Biography

Dr. Balwant Singh Gill has completed his MD from Dr.MGR Medical University in 2011 and DNB from Delhi from NBE in 2014. He is the Director & Head of Institute of Liver, Gastroenterology & Pancreatic Biliary Sciences, SGRD HOSPITAL (India) an advanced Endoscopy Center. He has published more than 5 papers in reputed journals and has been serving as a consultant Gastroenterologist, Hepatologist & Interventional Endoscopist at their center of gastroenterology from July 2015

Title: Quality of care index (qci) for liver cancer; global, regional, and national trends from 1990 to 2019

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Liver cancer (LC) is the 6th most common diagnosed cancer and ranked 4th in cancer-related deaths (1). World Health Organization has reportedly apprised health authorities of that the number of deaths due to LC will have surpassed one million by 2030 (2). Although the burden of the cancer and its underlying causes on humankind is colossal, there appear to be heterogeneities in coping approaches, and the implementation of current professional knowledge to achieve desired health outcomes has not been fruitful (3). The aim of this study was to assess the quality of care of liver cancer and its underlying conditions in global, regional, and national levels from 1990 to 2019. Data of incidence, prevalence, death, and disability-adjusted-life-years (DALYs) of LC and underlying causes including Hepatitis-B-Virus (HBV), Hepatitis-C-Virus (HCV), alcohol use, non-alcoholic-steatohepatitis (NASH), and other causes were obtained from Global Burden of Diseases study 2019. Principal-Component-Analysis was applied in order to combine age-standardized mortality-to-incidence-ratio, disability-adjusted-life-years-to-prevalence-ratio, prevalence-to-incidence-ratio, and years-of-life-lost-to-years-lived-with-disability-into a single proxy named Quality-of-Care-Index (QCI). Gender disparity ratio was used to assess the disparity in quality of care among sexes. The age standardized QCI score of liver cancer was 55.7 in global scale in 2019. From 1990 to 2019, the QCI score of liver cancer showed constantly increasing trends. The age standardized QCI scores were consistently highest and lowest among countries of high income (83.2 in 2019) and Sub-Saharan Africa (27.9 in 2019) super-region across the years respectively. Japan (QCI= 100), Finland (QCI=91.6), and the Republic of Korea (QCI= 91.2) had the highest QCI scores. The global QCI scores of LC due to HBV, HCV, alcohol use, NASH, and other causes reached 53.5, 61.8, 54.3, 52.9, and 63.7, respectively in 2019. The overall age-standardized gender disparity ratio was 0.9 by 2019, suggesting a slightly better quality of care for liver cancer among males. We showed improving trends in the quality of care of LC during 1990- 2019; however, a wide gap is shown between countries regarding coping approaches. Given inequities in healthcare quality, there is an urgent need to address discrimination and bridge the gap.

Biography

I am an MD/ PhD in Epidemiology graduate, and currently associate professor at Tehran University of Medical Sciences. I have mentored, supervised, collaborated in various research projects, and published over a hundred papers in various journals .

Title: Biological evaluation of liver fibrosis using a noninvasive test FIB4 in adults in the city of Yaoundé, Cameroun

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Background: Liver fibrosis can be induced by chronic viral hepatitis, toxic hepatitis, metabolic diseases, and autoimmune diseases. It is staged when the diagnosis of chronic liver disease is made, to detect complications, such as cirrhosis and hepatocellular carcinoma. But is often asymptomatic. The aim of this study was to determine the prevalence of liver fibrosis, using the combined platelet count, Alanine amino transferase, Aspartate Amino transferase and age - FIB-4 in an adult population with no history of known chronic liver disease.

Methods: We conducted a prospective analytical study. The study population was made of participants aged above 21 years old, with no known history of chronic liver disease. The measurement of transaminases enzymes (AST, ALT) activities and platelet count were carried out at the laboratory of the Yaoundé Central Hospital, by autoanalyzer's using the principles of photometric and the account combining impedance and micro-kinetics respectively. The FIB-4 score was calculated according to the formula proposed by Sterling et al. The statistical analysis of the data collected was carried out by SPSS software version 20.0. The result was significant when $p < 0.05$.

Objective: The general objective of our study was to determine the prevalence liver fibrosis using FIB-4 score in the adult population in the city of Yaoundé.

Results: A total of 183 participants were included, sex ratio 1. A third of the study population, 33.9% had liver fibrosis (FIB-4 score > 1.30) of whom a quarter 24.2%, had an advanced fibrosis, (FIB-4 score > 2.67). Some risk factors were associated to liver fibrosis: age (above 37 years), sex (female), metabolic syndrome and diabetes.

Conclusion: At the end of this study, we found liver fibrosis on participants with no history of known chronic liver disease. Some of them had advanced fibrosis. Hence the need of systematic screening of patients for liver fibrosis.

Biography

I hold a Doctor of Medicine Degree, a specialist certificate in medicine in Clinical biology and a master's degree in medical biochemistry. All my diplomas were obtained at the Faculty of Medicine and Biomedical Sciences of the University of Yaoundé I of Cameroon.

Title: Use of indocyanine green fluorescence imaging in the extrahepatic biliary tract surgery

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Cholelithiasis presents in approximately 20 % of the total population, ranging between 10% and 30 %. It presents one of the most common causes for nonmalignant surgical treatment. The cornerstone therapy is laparoscopic cholecystectomy, urgent or elective. Laparoscopic cholecystectomy is nowadays the gold standard surgical treatment method, however bile duct injury occurred to as high as 0.4-3% of all laparoscopic cholecystectomies. The percentage has decreased significantly to 0.26-0.7% because of increased surgical experience and advances in laparoscopic imaging the past decade which have brought to light new achievements and new methods for better intraoperative visualization such as HD and 3D imaging system. However, bile duct injury remains a significant issue and indocyanine green fluorescence imaging, mainly cholangiography but also angiography, can further enhance the safety of laparoscopic cholecystectomy as it allows the earlier recognition of the cystic and common bile duct, even in several times before dissecting the Callot triangle. Fluorescence cholangiography could be an ideal method to improve bile tree anatomy identification and enhance prevention of iatrogenic injuries during laparoscopic cholecystectomies and also it could be helpful in young surgeons training because it provides enhanced intraoperative safety, but however this method does not replace CVS. Finally, our ongoing current study results comparing intravenous to direct administration of ICG in the gallbladder will be presented.

Biography

Dr. Ioannidis studied medicine in the Aristotle University of Thessaloniki and graduated in 2005. He received his MSC in "Medical Research Methodology" in 2008 from Aristotle University of Thessaloniki and in "Surgery of Liver, Biliary Tree and Pancreas" from the Democritus University of Thrace in 2016. He received his PhD degree in 2014 from the Aristotle University of Thessaloniki for his thesis "The effect of combined administration of omega-3 and omega-6 fatty acids in ulcerative colitis. Experimental study in rats." He is a General Surgeon with special interest in laparoscopic surgery and surgical oncology and in surgical infections, acute care surgery, nutrition, and ERAS. He has received fellowships for EAES, ESSO, EPC, ESCP and ACS and has published more than 130 articles with more than 3000 citations and an H-index of 28

Title: Role of probiotics and prebiotics in the management of gastrointestinal disorders from SARS-CoV-2 and bacterial secondary infections

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The COVID-19, caused with the infection of SARS-CoV-2, has been a pandemic since December 2019. The virus, SARS-CoV-2, primarily infects lungs, and also causes dysbiosis of the gut microbiota, leading to the disruption of immune homeostasis (by invading gut epithelium using angiotensin-converting enzyme 2), thereby facilitating bacterial secondary infections causing gastrointestinal disorders. These events lead to a condition called blood-brain-barrier (BBB) dysfunction, which causes inflammation of the brain, and leads to severe and/or prolonged COVID-19. Prebiotics (including those derived from plant sources) —the components that enhance the viability and functionality of probiotics (in the gut), — act symbiotically thereby restoring the gut homeostasis and the BBB functionality as well, through gut-microbiota-brain axis. Thus, COVID-19 and the associated bacterial secondary infections causing gastrointestinal disorders might be prevented with probiotics as well as prebiotics supplementations

Biography

Dr. Shyamapada Mandal is Professor and Head of the Department of Zoology, and Dean (Science), University of Gour Banga, India. He is working on infectious diseases, probiotics, and genomics and bioinformatics research. He did pre-PhD, PhD, and post-PhD research under the guidance of Professor Nishith Kumar Pal at the Calcutta School of Tropical Medicine, India. He has published 122 articles with eight book chapters. He is life member of IAMM and IASR, India, and fellow member of SASS, India. Eight national academic and research awards have been conferred to him. He has guided 58 post graduate students; supervised three MPhil and three PhD students and supervising 7 PhD and one MPhil students. Professor Mandal is among the world's top 2% scientists as per the survey of the Stanford University, published in PLOS (Public Library of Science) Biology (October 2020). He is featured in the top 2% world scientists list for second and third consecutive time as published by the Stanford University-Elsevier BV (October 2021 and October 2022).