Preventing MASLD: A call to action in Pakistan

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Addressing the looming epidemic of metabolic dysfunctionassociated steatotic liver disease in Pakistan: A call for action

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The term metabolic dysfunction-associated steatotic liver disease (MASLD), which evolved from its predecessor, nonalcoholic fatty liver disease (NAFLD).[1] refers to a chronic condition characterized by hepatic steatosis. It more accurately reflects the pivotal role of cardiometabolic risk factors in its pathogenesis. [2-4] When liver steatosis is present, the identification of at least one of the following five cardiometabolic risk factors – 1) a body mass index (BMI) over 25 kg/m² (23 kg/m² for Asian individuals), or a waist circumference greater than 94 cm for men and 80 cm for women, with ethnicity-specific adjustments, 2) blood pressure above 130/85 mm Hg or undergoing specific anti-hypertensive drug treatment, 3) plasma triglycerides levels exceeding 150 mg/dL, or currently under lipid-lowering treatment, 4) plasma HDL cholesterol levels under 40 mg/dL for men or less than 50 mg/dL for women, or currently under lipid-lowering treatment, 5) fasting serum glucose level exceeding 100 mg/dL, or 2-hour post-load glucose levels over 140 mg/ dL, or glycated hemoglobin concentrations above 5.7%, or diagnosed with type 2 diabetes mellitus (DM), or currently undergoing treatment for type 2 DM – can lead to a diagnosis of MASLD.[2-4] Therefore, contrary to NAFLD, MASLD's identification does not require the exclusion of other liver diseases. However, it does necessitate the presence of indicators pointing toward disrupted cardiometabolic function. In the context of steatotic liver disease (SLD), the term MetALD is utilized to denote the interplay of two pivotal factors: metabolic anomalies (which include any cardiometabolic criteria) and alcohol consumption (daily intake ranging between 20 and 50 g for women and 30 and 60 g for men). [2-4] These two factors coalesce to contribute significantly to both the onset and progression of liver disease. When other causes of steatosis are identified, a diagnosis of mixed etiology is given. In scenarios where no overt cardiometabolic criteria are met, other potential causes should be ruled out. If no cause is found, the condition is termed cryptogenic SLD. However, depending on clinical judgment, it may also be considered potential MASLD, warranting periodic reassessment on an individual basis.[2-4]

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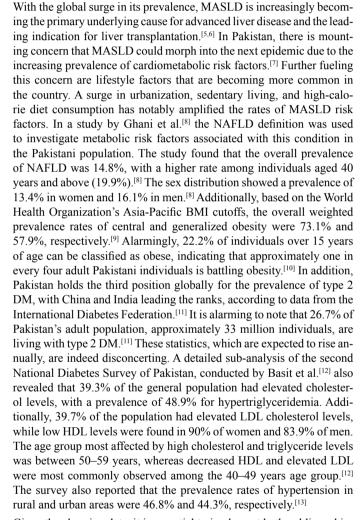
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Given the alarming data, it is essential to implement both public and individual preventive strategies against MASLD in the country. The repercussions of MASLD are extensive and significantly influence public health and the healthcare system. [14] For example, a specific group of patients with MASLD can develop advanced forms of liver disease, leading to cirrhosis, hepatocellular carcinoma, and liver failure. Notably, hepatocellular carcinoma may develop in MASLD even without the presence of cirrhosis. Compared to the general populace, patients with MASLD face a heightened risk of liver-related, cardiovascular, and overall mortality. [15] Notably, MASLD not only increases the risk but also exacerbates the pathophysiology of DM, cardiovascular diseases, and chronic kidney



disease. Furthermore, MASLD can be associated with a host of other health issues, including obstructive sleep apnea, osteoporosis, stroke, polycystic ovarian syndrome, and various extrahepatic malignancies.^[15]

Tackling MASLD and its associated complications necessitates a comprehensive approach that integrates public health initiatives, education, and policy amendments. Several strategies can be employed to mitigate the disease's impact, including public awareness campaigns, schoolbased interventions, enhanced healthcare infrastructure, and the design and implementation of effective policies. Firstly, it is vital to increase public awareness about MASLD's risk factors, preventive strategies, signs, and repercussions. Educational campaigns aimed at the wider community and healthcare professionals can facilitate early detection and prevention. Moreover, endorsing healthy lifestyle habits, including a balanced diet and regular exercise, is paramount in alleviating the strain of cardiometabolic disorders and MASLD. Secondly, the establishment of educational programs in schools should be geared towards cultivating healthy habits, encouraging physical activity, and offering nutritious meals to children. This approach directly addresses the escalating issue of childhood obesity. Thirdly, an all-encompassing healthcare strategy is essential to holistically manage MASLD. This requires the fortification of primary healthcare services to ensure early detection, diagnosis, and treatment of cardiometabolic disorders. Healthcare professionals should undergo training in the identification and management of MASLD, and the creation of specialized clinics is necessary to provide comprehensive care. Lastly, policy changes are integral to effectively combating MASLD. The introduction of regulations to manage the availability and promotion of unhealthy food products and beverages, particularly those high in sugar and trans fats, can aid in reducing the prevalence of cardiometabolic disorders. Tax policies that deter the consumption of sugary beverages and processed foods can also contribute to curbing the obesity epidemic and its associated complications. Encouraging a collaborative environment among healthcare professionals, researchers, and policymakers is crucial. This synergy will aid in the development of evidencebased guidelines for the prevention, diagnosis, and treatment of MASLD. In summary, it is of utmost importance that we take prompt action to curb the spread of MASLD and prevent it from turning into an epidemic in Pakistan. By effectively addressing the root causes of cardiometabolic disorders and implementing focused preventive measures with the collaboration of relevant stakeholders, we can lighten the strain on our healthcare systems. This, in turn, will substantially enhance the overall health and well-being of the Pakistani population.

Conflict of Interest: Yusuf Yilmaz has served as a consultant to Cymabay, Zydus, Novo Nordisk, and Echosens. The other authors have no conflict of interest.

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