Invited Editorial

More than just a name: "nonalcoholic fatty liver disease (NAFLD)" versus "metabolic associated fatty liver disease (MAFLD)"

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The term nonalcoholic fatty liver disease (NAFLD) has been used for more than three decades, and NAFLD is known to be a common cause of chronic liver disease.[1] Simple steatosis (NAFL) with the absence of liver cell damage or inflammation can develop into a condition with more progressive features known as nonalcoholic steatohepatitis (NASH), which then can lead to cirrhosis and hepatocellular carcinoma. A working group of liver pathologists in Japan has established a consensus regarding the pathological findings of NAFL and NASH. The presence of hepatocyte ballooning, Mallory-Denk bodies, and fibrosis are important features for the differential diagnosis of NAFL and NASH and to predict the progression of NAFLD.[2]

Recently, NAFLD has become a serious public health issue. Despite the significant efforts of clinicians and researchers to increase our understanding of NAFLD, its prevalence is still growing fast and is a cause of concern; indeed, NAFLD not only affects adults but also children. A cohort study of Swedish children and young adults with biopsy-confirmed NAFLD showed that they have significantly higher overall rates of cancer, cardiometabolic disease, and liver disease.[3]

The current definition of NAFLD requires the exclusion of other causes of liver disease, such as viral infections or autoimmune diseases, and confirmation that the subject has consumed only limited amounts of alcohol. The European Association for the Study of the Liver (EASL), the UK National Institute for Health and Care Excellence (NICE), the Italian Association for the Study of the Liver (AISF), and Japanese guidelines consider the upper limit of alcohol consumption for a diagnosis of NAFLD to be 30 g/day in men and 20 g/day in women. [4] However, the level of awareness regarding NAFLD among the general public is low. It is well known that significant alcohol consumption can lead to liver damage, but it is not widely recognized that such damage also can occur in people who drink only small amounts of alcohol or no alcohol at all. The use of “alcoholic” vs “nonalcoholic” also sparks concern that such diseases result from patient behavior, potentially resulting in social stigmatization and barriers to proper healthcare.[1]

In 2020, a panel of international experts published a consensus proposing replacement of the term NAFLD with metabolic associated fatty liver disease (MAFLD). [1,5] The use of MAFLD was considered to more appropriately reflect the fact that metabolic disorders such as overweight or obesity, type 2 diabetes mellitus, dyslipidemia, and hypertension are also key factors associated with the development of liver damage. [6] The updated nomenclature “MAFLD” was suggested to be advantageous in helping align fatty liver diseases with metabolic risk factors and in providing a path toward precision medicine for fatty liver disease that would not be possible under the guise of NAFLD. [7]

Since the new term MAFLD was proposed, numerous studies have been published in which experts attempted to define the diagnostic criteria for MAFLD and NAFLD. The concept of

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MAFLD and NAFLD also prompted a wave of debate among experts. The adoption of the new term has been called premature and likely to confuse the existing efforts to promote awareness of liver diseases among patients. One particular concern is that liver diseases also occur and progress in people who do not have metabolic disorders. Individuals with normal body mass index may also develop NAFLD.[8, 9]

The percentage of overlap between MAFLD and NAFLD is around 80%, the remaining cases comprise combined forms of MAFLD without NAFLD (MAFLD+/NAFLD–) and NAFLD without MAFLD (MAFLD–/NAFLD+).[6] A meta-analysis of the non-overlap groups comparing epidemiological and clinical features showed that the MAFLD-only subgroup had higher levels of alanine aminotransferase and aspartate aminotransferase and a higher prevalence of fibrosis than the NAFLD-only subgroup in the general population.[6, 10] Although these studies suggested that the novel term MAFLD may be better at identifying patients with long-term risk of progression of liver steatosis, the heterogeneous course of fatty liver disease highlights the need of further studies to assess the pathogenesis of each group in real-world clinical practice.

The debate over the use of MAFLD vs NAFLD is still ongoing. Nonetheless, it would seem appropriate to redefine NAFLD as our knowledge of the disease also develops. MAFLD may give us a broader scope to manage the disease more holistically according to its background, but we also need a better understanding of MAFLD subtypes.

Ultimately, educating patients about their individual health risks and preventing the progression of liver damage is more important than the name of the disease itself. There are still many patients who do not even recognize that fatty liver is actually a disease. Therefore, general education about fatty liver disease should be the main focus while the nomenclature question is being resolved.

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