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EDITORIAL

Metabolic-associated fatty liver disease: New nomenclature and approach with hot debate

Yasser Fouad

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Abstract

An international panel recently proposed an update to the terminology and diagnostic criteria for fatty liver disease. The experts proposed a change in the nomenclature from non-alcoholic fatty liver disease (NAFLD) to metabolic (dysfunction)-associated fatty liver disease (MAFLD). This single-letter change, we believe, heralds the dawn of a new era in clinical practice and in clinical and basic research as well. The new nomenclature with the easily applicable approach has stimulated the enthusiasm of the researchers worldwide, resulting in a large number of publications over the past two years. Several recent studies have provided tremendous evidence of the superiority of the MAFLD criteria over the NAFLD criteria. Many studies in different geographic areas of the world including the United States, Europe, and Asia on a large number of patients proved that the utility of MAFLD criteria was higher than that of the NAFLD criteria in different aspects of fatty liver diseases. Consequently, many societies, physician and nurse groups, health stakeholders, representatives of regulatory sciences, and others endorsed the new nomenclature. Here we highlight the endorsement of the new name by different societies and groups and the outcome of different studies on the new nomenclature in addition to a short discussion of the debate by some experts.

Key Words: Non-alcoholic fatty liver disease; Metabolic-associated fatty liver disease; Liver disease; Fibrosis; New nomenclature; Redefinition

Core Tip: An international panel recently proposed an update to the terminology and diagnostic criteria for fatty liver disease. The authors proposed a change in the nomenclature from non-alcoholic fatty liver disease (NAFLD) to metabolic (dysfunction)-associated fatty liver disease (MAFLD). Several studies have been published recently, and showed tremendous evidence of the superiority of MAFLD criteria over NAFLD criteria. Consequently, many societies, physician and nurse groups, health stakeholders, representatives of regulatory sciences, and others endorsed the new nomenclature.

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INTRODUCTION

The World Health Organization (WHO) has motivated scientists, doctors, and healthcare providers to use the appropriate medical terms and change the terms according to the patient's interest and the medical care provided. This call by the WHO was to overcome the stigmas and inaccuracies that may confer upon people, regions, and economies[1].

In the recent medical history, renaming of the diseases involved primary biliary cirrhosis, schizophrenia, epilepsy, autism, and others with ongoing trials to change the term ''noncommunicable diseases'' to a better positive name to gain more medical support by governments, societies, and stakeholders[2].

Since 1980 when the non-alcoholic fatty liver disease (NAFLD) was introduced[3], several trials have been carried out to rename the disease by different scientists and societies for different reasons. In 2019, Eslam *et al*[4] proposed changing the traditional NAFLD to metabolic dysfunction-associated liver disease (MAFLD). The single-letter change means a lot for researchers, physicians, and patients. The authors explained their vision of new nomenclature by linking the fatty liver to the metabolic syndrome which is the most common and most serious etiology of fatty liver diseases and under-evaluated when using the older nomenclature. Moreover, the new nomenclature gives the clinical community a chance to avoid the stigma of alcohol intake, avoid the negativity of NAFLD nomenclature, and overcomes trivialization[2]. The simplified criteria for diagnosis of MAFLD were put forward by consensus of an international panel of hepatologists in 2020[5]. These criteria pave the way for easy diagnosis of fatty liver diseases because of easy applicability. The consensus considered the diagnosis of MAFLD based on the presence of steatosis by imaging or histopathology in addition to the presence of diabetes mellitus or obesity/overweight or two out of seven metabolic dysfunction criteria (Figure 1). The new nomenclature and approach better clarify the role of metabolic dysfunctions in fatty liver disease and make the fatty liver closer to its pathophysiology.

The new nomenclature with the easily applicable approach stimulated the enthusiasm of researchers worldwide, resulting in a large number of publications over the last two years. Several studies have been published recently, showing tremendous evidence of the superiority of MAFLD criteria over NAFLD criteria. Many studies in different geographic areas of the world including the United States (US), Europe, and Asia on a large number of patients proved that the utility of MAFLD criteria was higher than that of the NAFLD criteria in different aspects of fatty liver diseases.

Among the many important findings, MAFLD criteria could better identify patients at risk of liver fibrosis than the NAFLD criteria in the American population[6]. High diagnostic ability of fatty liver index in the detection of steatosis was seen in patients with MAFLD[7]. Fibrosis-4 index and NAFLD fibrosis score could confidently be used to exclude advanced fibrosis in overweight, obese, and severely obese patients with MAFLD[8]. MAFLD is associated with a higher incidence of hepatocellular carcinoma[9]. MAFLD (not NAFLD) predicts extrahepatic malignancy[10]. MAFLD was better than NAFLD in identifying patients at high risk of renal diseases[11]. In a recent meta-analysis, MAFLD was associated with increased severity of COVID-19[12]. Renaming to MAFLD increases awareness of the disease among primary care providers and physicians in other specialties[13]. Change to MAFLD has a positive impact on clinical trials[14,15] MAFLD identifies the severity of the coexistence of fatty liver disease with other liver diseases[16,17].

Being convinced by the reasons for changing nomenclature, evidence of the superiority of the new name MAFLD, and the benefits of the new nomenc-lature, many international societies, patient groups, stakeholders, nurse groups, and representatives of pharmacist and regulatory sciences have endorsed the new nomenclature (Table 1). In an unprecedented manner, a unique gathering of more than a thousand international experts from more than 135 countries worldwide signed an agreement on a global multi-stakeholder endorsement of the MAFLD definition published recently.

Table 1 Metabolic-associated fatty liver disease endorsement by societies, groups, and stakeholders

Type of endorsement	Endorsed by	Ref.
Guidelines	APASL	[25]
Guidelines	Egyptian EMRG group	[26]
Consensus statement	Middle East and North Africa group	[27]
View point (perspectives)	International nurse and allied health groups	[28]
Position statement	ALEH	[29]
Position statement	The Chinese Society of Hepatology	[30]
Position statement	ISTP	[31]
Position statement	Arabic Association for the Study of Diabetes and Metabolism	[32]
Consensus statement	Malaysian Society of Gastroenterology and Hepatology	[33]
Viewpoint (perspectives)	International leaders in regulatory science and drug development	[34]
Position statement	International representatives of patient advocacy groups	[35]
Letter of endorsement	Global multi-stakeholder from more than 135 countries worldwide	[36]
Editorial of endorsement	Spanish Society of Gastroenterology	[37]

APASL: Asian Pacific Association for the Study of the Liver; EMRG: Egyptian MAFLD Research Group; ISTIP: The International Society of Tropical Pediatrics; ALEH: The Latin American Association for the Study of the Liver.

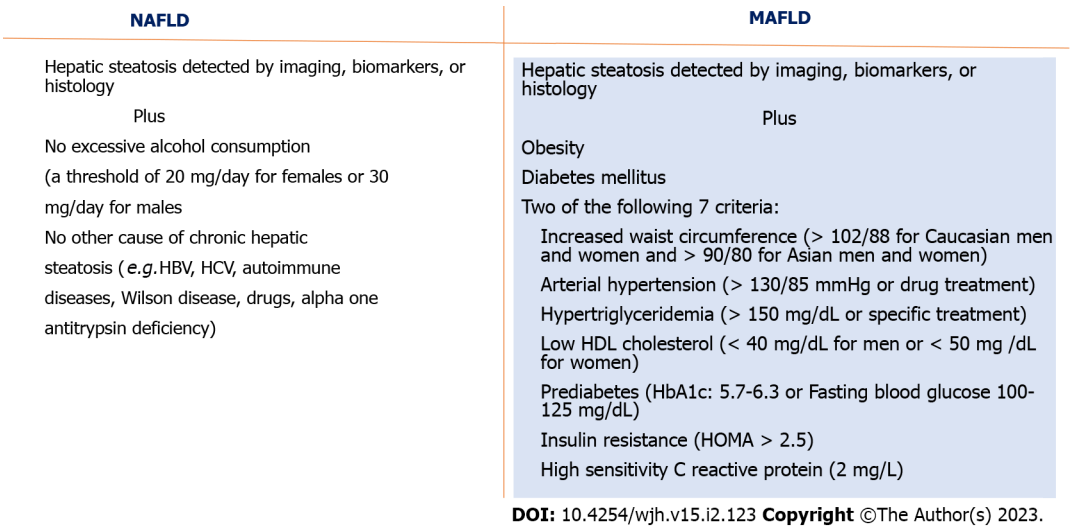

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Figure 1 Criteria for diagnosis of metabolic dysfunction-associated fatty liver disease and non-alcoholic fatty liver disease. NAFLD: Non-alcoholic fatty liver disease; MAFLD: Metabolic-associated fatty liver disease; HBV: Hepatitis B virus; HCV: Hepatitis B virus; HDL: High-density lipoprotein; HbA1c: Hemoglobin A1c; HOMA: Homeostasis model assessment.

Two major hepatology societies, The European Association for Study of the Liver and The American Association for the Study of Liver Diseases, have not endorsed the new name yet till writing this editorial. The debate from these societies focused mainly on the prematurity of change[18]. One of the main debates is about non-metabolic or lean NAFLD. Evidence proved that the non-metabolic NAFLD group seems to be comparable to subjects with no fatty liver in terms of cardiovascular-related mortality as well as all-cause mortality. Moreover, the non-metabolic NAFLD group seems to be at a very low risk of fibrosis (0.8%)[19]. Another concern was about pediatric NAFLD. In a recent study involving 1446 US adolescents aged 12–18 years from the National Health and Nutrition Examination Survey III, MAFLD criteria were met by most of these US adolescents with elastographic evidence of steatosis[20]. Additional debate was about clinical trials. In a recently published paper, a group of researchers declared that the new name and approach with positive inclusion criteria lead to easier recruitment of patients and are more likely to give positive results[21]. Being in the era of evidence-based medicine, we believe that the need for an evidence-based debate is mandatory. Once again, the MAFLD conceptual framework removes the concept that there is no alcohol involvement, links the liver disease

which is commonly seen in metabolic dysregulation with its systemic effects, and performs better in patient identification, risk stratification, disease awareness, and networking with metabolic disease physicians[22,23].

The important question in the current situation is why some experts do not change their attitude toward the new nomenclature despite the obvious conspicuous evidence. The answer is not clear although, pleasingly, since the very beginning, the weight of evidence appears to have led to the persuasion of an ever-increasing number of stakeholders on the increasing benefits. Another important issue is that experts who advocate against the redefinition despite the robust evidence should explain to the hepatology community how and why we discard the rapidly progressive growing body of new literature[24].

CONCLUSION

In summary, we have a redefinition of a very prevalent disease worldwide. The new nomenclature MAFLD is simple, with superior utility, and is supported by a tremendous amount of evidence. It is endorsed by many societies and full global adoption is a matter of time.

FOOTNOTES

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