

EDITORIAL

Looking for a new name for non-alcoholic fatty liver disease in Spanish: *esteatosis hepática metabólica (EHmet)*

The name of a disease does not follow any defined protocol and the scientific community's acceptance of several variants based on the customs of every location is usual. There are examples of prevalent entities with curious naming processes, such as diabetes mellitus. The first word, "diabetes", comes from the Greek *día* (through), *be* (to go), and *tes* (factor), while the second word, "mellitus", comes from Latin *melli* (honey). As a consequence, diabetes mellitus literally means "the sweet factor that goes through...", pertaining to an excessive and sweet diuresis. Thus, we could deduce that a definition representing exactly the pathophysiology of the particular disease is not required. Likewise, primary biliary cirrhosis changed its name to primary biliary cholangitis (1) because most of the patients do not develop cirrhosis. Furthermore, the denomination generated anxiety, confusion, and stigmatization due to the fact that society generally believes that cirrhosis is associated with unhealthy habits (2). Some intermediate options to change the name to non-suppurative destructive cholangitis were not successful due to the lack of empathy and the agreement with the patients, even though it was precise. By contrast, diseases denominated by their discoverer's name are less controversial, such as Wilson's disease, although they can also generate confusion over time because new phenotypes are identified beyond the initial description.

Whether liver steatosis has the name of Ludwig's disease, honoring its discoverer in 1980, had not been under debate until now. Non-alcoholic fatty liver disease (NAFLD) has had different denominations from the initial description (3), including *non-alcoholic steatohepatitis* (NASH). All the terms try to reflect the existence of a liver disease characterized by fat (steatosis) that is not attributable to alcohol intake. However, the lack of consensus regarding the precise denomination has made no mention of this entity in the CIE 10, section 11.12 Liver Diseases (4). Therefore, the two more relevant aspects to propose a change of a denomination should be: a) the current term generates confusion into the society and could stigmatize the patients; and b) the potential benefits associated with the changed concept (beyond the denomination), in terms of management of the disease, including an improvement in the access to the healthcare resources (Fig. 1). Furthermore, some questions are recommendable to comment on NAFLD:

1. It is a negative diagnosis ("non-alcoholic"), so it generates confusion and stigmatization for the patient (often, they need to give explanations). Furthermore, knowing the amount of alcohol intake is very complex, as neither questionnaires (e.g., AUDIT) nor available biomarkers in the clinical practice (e.g., carbohydrate-deficient transferrin), nor the ANI index allow the classification of the patients unequivocally. On the other hand, the endogenous production of alcohol by some bacteria, such as alcohol-producing *Klebsiella pneumoniae* (HiAlc Kpn) (5) or other proteobacteria, can play a role in the progression of the disease. Taking all this together, the inclusion of "non-alcoholic" into the name is incorrect (6).

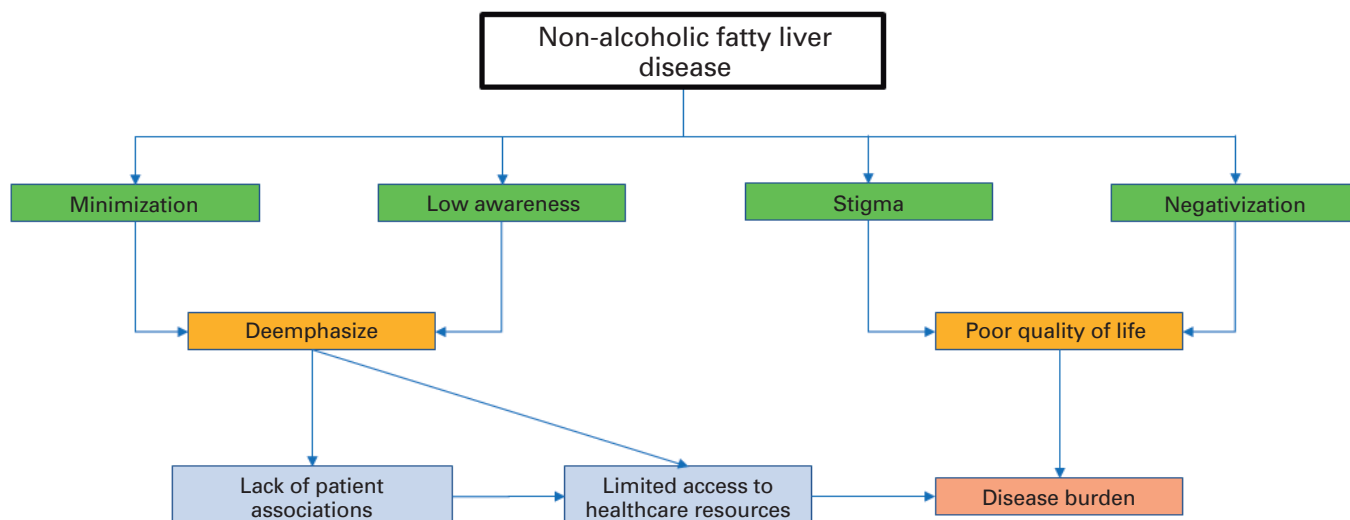


Fig. 1. Negative aspects and consequences derived from the current terminology non-alcoholic fatty liver disease from the patient's perspective.

2. The alteration of both carbohydrate (insulin resistance) and lipid metabolism (lipolysis, oxidation, and *de novo* lipogenesis) are pathogenic and critical events in this entity. Moreover, the leading triggers of this disease are metabolic disorders such as diabetes mellitus, obesity and metabolic syndrome (7). Thus, the term “metabolic” should be included in the new denomination (8).
3. Fat (steatosis) is consubstantial in the appearance of this disease, although it has a controversial role in its progression as the decrease of fat over time could be related to a poor prognosis (9). On the other hand, the presence of steatosis in the denomination would prevent a confusion with other metabolic diseases not directly related to the production of fat, such as hemochromatosis or Wilson’s disease.
4. The term liver/hepatic must be maintained in the denomination, due to the fact that the liver disease is the relevant affect and is responsible for the morbidity, even though it is a systemic disease that affects several organs.

Non-alcoholic fatty liver disease is a dynamic entity, which progresses and regresses. At least four phenotypes have been defined: slow progressors, rapid progressors, patients with stable disease and those who regress completely. Both genetics and the impact of implementing lifestyle changes allow us to explain, at least in part, this variability. Depending on the age, ethnicity, alcohol intake, sex, genetic background and microbiota (10), among other factors, several disease patterns are observed. Different subtypes result in a variable natural history (11) and a different response to the treatment (12). Consequently, it is a systemic, dynamic and heterogeneous disease, with an impairment of various physiological axis, including the metabolic-liver and gut-liver axis (13). This entity requires a precise and accurate denomination, which allows us to get close to its pathophysiology and natural history, as well as its diagnosis and treatment. Thus, avoiding terms that could stigmatize or confuse us. The search for a new denomination must consider all the disease’s singularities (14), prevent incorrect concepts and, particularly, generate a place of interaction and consensus that is beneficial for patients and professionals.

Taking advantage of the HEPAMET registry, which belongs to the Spanish Association for the Study of the Liver (AEEH) and Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (CIBEREHD), we proposed to form a consensus about the Spanish name of this entity following the Delphi approach. An on-line session was organized for brainstorming and different terms and acronyms were proposed. Finally, after a rigorous selection process, the HEPAMET registry group considered that the more appropriate denomination was metabolic-associated fatty liver disease (MAFLD). This new terminology contains all the pre-established requisites, including a positive definition, avoiding the use of the word “alcohol” and including the terms “liver/hepatic”, “metabolic,” and “fat/steatosis”. Furthermore, the acronym is easy to pronounce. However, it will be the scientific community’s acceptance and inclusion in the routine use and the ability to increase social awareness, as well as the economic impact of this entity that will ultimately change the name from NAFLD to MAFLD.

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