

Metabolic dysfunction-associated steatotic liver disease: the new mapping of a silent disease

Enfermedad hepática esteatósica asociada a disfunción metabólica: la nueva cartografía de una enfermedad silenciosa

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Few transformations in modern hepatology have had such a profound impact as the redefinition of the spectrum of liver diseases caused by fat deposition. Under the new nomenclature of steatotic liver disease (SLD) and its central metabolic category, metabolic dysfunction-associated steatotic liver disease (MASLD), the scientific community has recognized not only the need for greater conceptual precision but also the urgency of building a language that reflects the clinical, epidemiological, and human reality of this condition. This change is not merely terminological, but rather the expression of a broader and more lucid view of a problem that silently advances in our hospitals, clinics, and communities.

In this special issue, the journal *Clínicas de Gastroenterología de México* calls for a deep reflection on a disease that, although known for decades, had never been so visible or so well understood. The new nomenclature inaugurates a framework intended to be more inclusive, clearer, and more useful for both patients and clinicians. Reviewing the historical evolution of these terms, from their first descriptions to the consolidation of the MASLD denomination, reveals an academic and social journey, a transition from simplification toward complexity, from the descriptive toward the truly explanatory.

Contemporary epidemiology reveals a disturbing landscape, where MASLD has become one of the major burdens for health systems of our times, especially in countries such as Mexico, where the convergence of obesity, diabetes, and metabolic syndrome enhances its expansion. This disease, once considered a benign finding, now emerges as a determinant of mortality, disability, and deterioration of quality of life, acting as a silent protagonist in the genesis of cardiovascular disease and advanced liver disease.

The pathophysiological understanding, for its part, unfolds as a fascinating and complex framework. Energy excess, insulin resistance, persistent inflammation, mitochondrial dysfunction, microbiota participation, and genetic determinants form a molecular narrative that explains the extraordinary diversity of clinical presentations and progression toward fibrosis and cirrhosis. In this biological narrative, the liver appears as a privileged witness of modern metabolism, vulnerable to the same changes that define contemporary life.

The endocrine field adds an additional dimension of depth. What was previously interpreted exclusively as a consequence of insulin resistance is now recognized as a broader network of hormonal alterations: thyroid, adrenal, gonadal, and somatotrophic axes that modulate, amplify, or mitigate the course of the disease. MASLD

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thus reveals itself as a multisystemic disease, a crossroads between metabolism, inflammation, and hormonal regulation. The inevitable presence of metabolic comorbidity reinforces this systemic view. In this way, diabetes, hypertension, dyslipidemia, and obesity not only accompany MASLD but also shape it, intensify it, and, in many cases, determine it. Similarly, cardiovascular risk can no longer be conceived as a distant outcome, and must be viewed as the immediate horizon of disease's evolution, demanding comprehensive assessment tools and decisive intervention.

This special issue also pauses on the art of diagnosis, which includes clinical examination, laboratory testing, imaging, and fibrosis assessment, all converging in a process that combines tradition, technology, and clinical judgment. It is well known that modern medicine is moving toward precision, and MASLD is no exception; therefore, biomarkers, quantitative magnetic resonance techniques, and non-invasive stratification tools transform the way we identify and accompany patients. We must include in this issue the intersection between alcohol and metabolic dysfunction, which acquires new meaning under the concept of MetALD, which is a reminder that clinical reality rarely conforms to rigid categories. Another indispensable chapter is MASLD-associated hepatocellular carcinoma, a consequence whose magnitude is only now beginning to be understood. Its rising epidemiology, its mechanisms of genesis even in non-cirrhotic livers, and its diagnostic

peculiarities represent some of the greatest challenges of contemporary hepatology.

Dietary management returns to occupy the place that always belonged to it: the therapeutic foundation upon which any additional intervention is built. The question is no longer only which diet is better, but rather how to adapt it to each patient, how to accompany it, and how to convert it into a lasting tool for health.

In the pharmacological field, the panorama is changing rapidly. New agents, combination therapies, pharmacogenomics, and updated criteria for therapeutic initiation outline a roadmap that moves away from the therapeutic nihilism that dominated decades ago. Finally, endoscopic and surgical interventions broaden the therapeutic repertoire for selected patients, reminding us that MASLD demands an interdisciplinary approach, in which hepatology, endocrinology, nutrition, cardiology, psychology, and surgery dialogue to offer comprehensive solutions.

This special issue aspires to be more than a collection of articles; it seeks to be a turning point, a testament to the historical moment in which hepatology rethinks its foundations in the face of a disease that today defines the health of the population. MASLD is an invitation to deep reflection, to rigorous practice, and to collective action. May these pages serve as a guide, as inspiration, and as a reminder of the commitment of our beloved Mexican Association of Gastroenterology to a more precise, more humane medicine that is more conscious of the challenges of the 21st century.