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REVIEW ARTICLE

The Relationship Between Nonalcoholic Fatty Liver Disease and Hepatitis B: Ameliorating or Aggravating?: A Systematic Review

La Relation Entre la Stéatose Hépatique Non Alcoolique et l'Hépatite B: Améliorante ou Aggravante ? Une Revue Systématique

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ABSTRACT

BACKGROUND/PURPOSE: Chronic Hepatitis B is a global health challenge which has persisted despite universal vaccination against Hepatitis B. The relationship between hepatitis B virus infection and Non-alcoholic Fatty disease (NAFLD) remains unclear thus, a review was carried out to elucidate the nature of the relationship existing between them and the risk factors for this interrelation.

DATA SOURCE AND SELECTION: The accepted guideline for a systematic review was followed. English language-based studies on hepatitis B and NAFLD in adult populations between 2010 -2021 were sourced from CINHAL, PubMed, Medline, Scopus, google scholar and ScienceDirect database.

DATA EXTRACTION: Following the PICO format, studies which met the inclusion criteria were identified and selected on a Prisma chart. They were further assessed using the modified Newcastle-Ottawa score for the assessment of non-randomized studies.

RESULT: 11 out of 12,380 studies obtained from multiple databases were included in the review comprising of 128,566 controls and 5177 cases. The relationship between exposure to hepatitis B infection and NAFLD outcome was aggravating, ameliorating and non-existent in six, four and one study respectively. Risk factors for NAFLD identified include metabolic factors such as increased body mass index, hyperglycaemia, raised triglycerides, metabolic syndrome, hyperuricemia and the presence of hepatitis B HBx protein.

CONCLUSION: NAFLD is most likely to occur in HBV patients in the presence of host metabolic factors.

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KEYWORDS: Non-alcoholic liver disease, Hepatitis B virus infection, Chronic hepatitis B, Aggravating, Ameliorating, Metabolic-associated fatty liver disease

RÉSUMÉ

CONTEXTE/OBJECTIF: L'hépatite B chronique représente un défi majeur de santé publique à l'échelle mondiale, malgré la vaccination universelle contre le virus. La relation entre l'infection par le virus de l'hépatite B (VHB) et la stéatose hépatique non alcoolique (NAFLD) reste incertaine. Une revue a donc été menée afin d'éclaircir la nature de cette relation et d'identifier les facteurs de risque associés.

SOURCE ET SÉLECTION DES DONNÉES: Les directives reconnues pour la réalisation d'une revue systématique ont été suivies. Les études en anglais portant sur l'hépatite B et la NAFLD chez les adultes entre 2010 et 2021 ont été extraites des bases de données CINHAL, PubMed, Medline, Scopus, Google Scholar et ScienceDirect.

EXTRACTION DES DONNÉES: En suivant le format PICO, les études répondant aux critères d'inclusion ont été identifiées et sélectionnées à l'aide d'un diagramme Prisma. Elles ont ensuite été évaluées selon le score modifié de Newcastle-Ottawa pour les études non randomisées.

RÉSULTATS: Sur les 12 380 études recensées, 11 ont été incluses dans la revue, représentant 128 566 témoins et 5 177 cas. La relation entre l'exposition au VHB et la NAFLD était aggravante dans six études, améliorante dans quatre, et inexistante dans une. Les facteurs de risque identifiés pour la NAFLD incluent des facteurs métaboliques tels qu'un indice de masse corporelle élevé, l'hyperglycémie, des triglycérides élevés, le syndrome métabolique, l'hyperuricémie et la présence de la protéine HBx du VHB.

CONCLUSION: La NAFLD est plus susceptible de se développer chez les patients atteints du VHB en présence de facteurs métaboliques propres à l'hôte. WAJM 2025; 42 (6): 494-505

MOTS-CLÉS: Stéatose hépatique non alcoolique, Infection par le virus de l'hépatite B, Hépatite B chronique, Aggravante, Améliorante, Stéatose hépatique associée au métabolisme

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