Associated Factors of Hypercholesterolemia, Hyperuricemia and Double Burden of Hypercuricémia-Hypercholesterolemia in Gout Patients: Hospital Based Study

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Abstract : Context: Hyperuricemia, the presence of high levels of uric acid in the blood, is a known precursor to the development of gout. Recent studies have suggested a strong association between hyperuricemia and disorders of lipoprotein metabolism, specifically hypercholesterolemia. Understanding the factors associated with these conditions in gout patients is essential for effective treatment and management. Research Aim: The objective of this study was to determine the prevalence of hyperuricemia, hypercholesterolemia, and the double burden of hyperuricemia-hypercholesterolemia in the gouty population. Additionally, the study aimed to identify the factors associated with these conditions. Methodology: The study utilized a database from a survey of 150 gouty patients recruited at the Laquintinie Hospital in Douala between August 2017 and February 2018. The database contained information on anthropometric parameters, biochemical markers, and the food and drugs consumed by the patients. Hyperuricemia and hypercholesterolemia were defined based on specific serum uric acid and total cholesterol thresholds, and the double burden was defined as the co-occurrence of hyperuricemia and hypercholesterolemia. Findings: The study found that the prevalence rates for hyperuricemia, hypercholesterolemia, and the double burden were 61.3%, 76%, and 50.7% respectively. Factors associated with these conditions included hypertriglyceridemia, atherogenicity index TC/HDL ratio, atherogenicity index LDL/HDL ratio, family history, and the consumption of specific foods and drinks. Theoretical Importance: The study highlights the strong association between hyperuricemia and dyslipidemia, providing important insights for guiding treatment strategies in gout patients. Additionally, it emphasizes the significance of nutritional education in managing these metabolic disorders, suggesting the need to address eating habits in gout patients. Data Collection and Analysis Procedures: Data was collected through surveys and medical records of gouty patients. Information on anthropometric parameters, biochemical markers, and dietary habits was recorded. Prevalence rates and associated factors were determined through statistical analysis, employing odds ratios to assess the risks. Question Addressed: The study aimed to address the prevalence rates and associated factors of hyperuricemia, hypercholesterolemia, and the double burden in gouty patients. It sought to understand the relationships between these conditions and determine their implications for treatment and nutritional education. Conclusion: Findings show that it's exists an association between hyperuricemia and hypercholesterolemia in gout patients, thus creating a double burden. The findings underscore the importance of considering family history and eating habits in addressing the double burden of hyperuricemia-hypercholesterolemia. This study provides valuable insights for guiding treatment approaches and emphasizes the need for nutritional education in gout patients. This study specifically focussed on the sick population. A case–control study between gouty and non-gouty populations would be interesting to better compare and explain the results observed.

Keywords : gout, hyperuricemia, hypercholesterolemia, double burden

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