

POSTER ABSTRACT

How War and Conflict Redefine Gout in Sudan: A Hospital-Based Study at Al-Bagadeed Teaching Hospital, Khartoum (2023–2024)

International Conference on Integrated Care (ICIC26), Birmingham, 13–15 April 2026

Hamzaelhussein Mohieldin^{1,6}, Fatima Ismaeil Ali Mohammed^{2,3}, Mohammed Sharf Aldein⁴, Mohammed Ganim^{1,5}

1: KURA Research Center, Sudan

6: University of Kasaala, Faculty of Medicine, Sudan

2: Napata College of Medicine and Surgery, Sudan

3: University of Khartoum, Faculty of Science, Sudan

4: Sudan International University, Faculty of Medicine

5: National C

Background: The war in Sudan has caused a major disruption in food security, resulting in the dietary of the population to change drastically from different diets to survival rations, which are mainly composed of legumes from communal kitchens ("Takaya"). This study explores the effects of such a sudden change from nutritional "excess" to "scarcity" on the manifestation of gout arthritis, which is a medical condition that has been traditionally associated with affluence and the consumption of a high meat diet.

Approach: The research was of the descriptive cross-sectional type conducted at Albanjadeed Hospital in Khartoum from 2023 to 2024, which is a hospital that remained operational for the most part during the conflict.

Information was gathered from 386 patients with clinically diagnosed gout through the use of interviewer-administered structured questionnaires. The study recorded the patients' socio-demographics, focused dietary patterns (legume vs. meat intake), meal frequency, and also recorded the presence of comorbidities; the data were later analyzed using SPSS (Chi-square tests, ANOVA, and T-test).

Results: The research involved 386 individuals, out of which 66.8% were females and 62.4% were people coming from low-income households. Nutritional investigation confirmed that the participants mainly relied on legumes (e.g., beans and lentils, 40.9%; lentils only, 27.7%) with meat intake being minimal (<10%). There was a statistically significant relationship between the kind of food consumed and the frequency of gout attacks ($p = 0.002$) as well as the age of the individuals ($p < 0.001$). In addition, the participant's economic status was significantly related to the monthly prevalence of gout ($\chi^2 = 19.07$, $p = 0.025$) with the rate of attack higher among

those of low-income participants. It is worthy to note that male gender ($p = 0.171$) and alcohol consumption ($p = 0.637$) as risk factors for gout did not show any significance in this study.

Implications: This study provides evidence that during a war situation characterized by extreme food insecurity, the epidemiology of gout can turn around such that it goes from being a "disease of excess" to a "disease of scarcity."

The research findings point out that severely malnourished patients, particularly those consuming a high-purine legume-based survival diet combined with low hydration and infrequent meal intake, can be the main drivers of gout attacks. These findings carry global significance and serve as a call for the humanitarian health sector to not only provide nutritional support but also integrate chronic disease management and modify clinical guidelines in accordance with survival-driven dietary patterns.