

Nutritional Intervention and Lifestyle in Gout or Pseudogout - Case Study

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Abstract:

The present case study reported a patient, 47 years old, with a 3-month history of articulation aches, initially only in the right ankle, later in the first metatarsophalangeal joint of the same lower limb. The symptomatology is identical to that of gout, although the crisis episodes have never been determined by the increase in the level of uric acid in the blood. The patient, having obesity of the first degree, followed an empirical diet based on starvation, losing 5 kg in the last 3 weeks, until he contacted our office. He was prescribed Aflamil, taken temporarily and without obvious results. He self-assessed as a daily alcohol user. The presented biochemical profile was normal, except for increased levels of fibrinogen (617 mg/dl; normal between 200-400 mg/dL, ESR (18 mm/h; normal < 15 mm/h), ferritin (320; normal up to 300 µg/l) and low 25-hydroxy-vitamin D (20 ng/mL; normal between 30-100 ng/mL). The case study aimed at weight loss, understanding the importance of lifestyle change, and finding a behavioral alternative food for controlling the feeling of permanent hunger, eliminating joint symptoms, and normalizing laboratory parameters.

Key words: gout; nutrition; weight; lifestyle

Introduction

Patient X, 47 years old, with a history of several months of polyarthralgia, the right ankle and the first metatarsophalangeal joint of the right lower limb, with symptoms identical to those of gout, with pain in the affected joint, swelling of the respective area accompanied by erythema and sensitivity to touch. The episodes of pain crisis were not correlated with the increase in the level of uric acid in the blood. Although, according to the specialized literature, pseudogout is a condition rarely seen at young ages, under 60 years [1], the biochemical profile also created the suspicion of this pathology. Laboratory analyzes were normal, except for elevated levels of fibrinogen (617 mg/dl; normal between 200-400 mg/dL, ESR (18 mm/h; normal < 15 mm/h), ferritin (320 normal to 300 µg/l) and low 25-hydroxy-vitamin D (20 ng/mL; normal between 30-100 ng/mL), and magnesium at the lower limit. The last two analyzes could suggest a secondary hyperparathyroidism, and elevated ferritin in this context is a risk factor for pseudogout on the other hand, there are specified particular situations (below 10%) when the gout attack is not accompanied by hyperuricemia due to the hormonal response of the adrenal cortex to the stress caused by the painful process.

Case presentation

The patient, 47 years old, 1.72 m tall and 102 kg, completed a nutritional assessment questionnaire from which we extracted the following data:

Personal history: obesity degree I, known with several episodes of gastritis, appendectomy in childhood, non-smoker, consumes alcohol daily 4-5 glasses of wine and beer, stress level on a scale from 1-5, ticked 4, with chaotic schedule within the company where he worked.

Family history: father with hypercholesterolemia, hypertension and obesity

History: the patient, known to have obesity degree I (BMI= 34.8), was recommended to reduce weight for a favorable effect on problem joints - ankle, respectively right big toe, which swelled during painful crises, they were sensitive to touch and reddened. He dieted for 3 weeks, more precisely he starved himself, losing about 4.5 kg, from 106.8 kg to 102.2 kg, after which he stuck at this weight. The patient met several food triggers of the gout/pseudogout attack - obesity, starvation, subsequent food excess and the use of alcohol. Having a new painful episode, he decided to consult a specialist and requested a controlled weight loss program, in an online version.

Diagnosis: Uncertain, with clinical and laboratory aspects that could equally well suggest gout or pseudogout, conditions with similar symptoms, but with different localization and above all, different causes. Although a puncture was suggested by the rheumatologist to examine the synovial fluid from the inflamed joint and obtain a definite diagnosis, the

patient refused this analysis. Laboratory analyzes were normal, except for elevated levels of fibrinogen (617 mg/dl; normal between 200-400 mg/dL, ESR (18 mm/h; normal < 15 mm/h), ferritin (320; normal up to 300 µg/l) and low 25-hydroxy-vitamin D (20 ng/mL; normal between 30-100 ng/mL), and magnesium at the lower limit.

Nutritional intervention: within the program, the patient was asked to keep a daily food diary, with the identification of feelings of hunger, satiety and degree of food satisfaction, following the menus both quantitatively and qualitatively. All the sessions were held online, with monitoring on the patient scale of body mass index parameters, somatic fat and active muscle mass. We also provided psychonutrition support, when the patient felt anxiety and stress in finding food solutions when he had to leave the place of residence due to the service.

Discussions

Although our meetings were only in an online environment, the patient was very involved, wanting to lose weight and stop having joint pain. The changes observed at each session, on the decrease in body fat percentage and of course on the total weight, motivated him to be persistent and attentive to his food choices, especially when he was forced to leave home for several days or work at night.

Gout attacks are known to be triggered by foods with a medium to high purine content, such as organ meats, red meat, seafood, alcohol and beer. Considering the fact that research has shown that vegetables rich in purines do not trigger gout attacks [2], I recommended food combinations with vegetables and legumes to my patient. Legumes such as beans, lentils, chickpeas were frequently used in the diet for protein intake. He also had access to dairy products. Instead, although they are not rich in purines, fruit juices and soft drinks have been restricted, especially those with sweeteners such as fructose-glucose syrup, which accelerate several cellular processes that cause inflammation and increase uric acid levels [3,4].

In accordance with the laboratory analyses, the patient was recommended a vitamin D supplement for a period of three months as long as the nutrition program lasted, and also a curcumin supplement. Curcumin relieves gouty arthritis, representing an active ingredient with anti-inflammatory efficacy [5]. He also adjusted his lifestyle in terms of movement/daily physical activity [6-8].

Conclusions

At the end of the 3 months, the patient's goal of reaching below 95 kg weight and above all, to stop having gout attacks, was achieved. The laboratory analyzes normalized, both inflammatory parameters and 25-hydroxy-vitamin D. The patient lost 7.5 Kg during this period, the body mass index (BMI) decreasing from 34.8 (the upper limit for obesity grade I) at 31.7, eating balanced, without hunger, with fullness at every meal. After 2 months from the end of the program, the weight was under control, without health problems.

Conflict of Interest

The authors declare no conflict of interest.

References:

1. Neame RL, Carr AJ, Muir K, Doherty M. (2003). UK community prevalence of knee chondrocalcinosis: evidence that correlation with osteoarthritis is through a shared association with osteophyte. *Ann Rheum Dis.* 62(6):513-518.
2. Choi HK, Atkinson K, Karlson EW. (2004). Purine Rich Foods, Dairy and Protein Intake, and the Risk of Gout in Men. *N Engl J Med.* 350:1093-1103.
3. Hyon K. Choi, Mount DB. (2005). Pathogenesis of gout. *Ann Intern Med.* 143(7):499-516.
4. Bray GA. (2013). Energy and fructose from beverages sweetened with sugar or high-fructose corn syrup pose a health risk for some people. *Adv Nutr.* 4(2):220-225.
5. Xiong Li et al. (2019). Curcumin ameliorates monosodium urate-induced gouty arthritis through Nod-like receptor 3 inflammasome mediation via inhibiting nuclear factor-kappa B signaling. *J Cell Biochem.* 120(4):6718-6728.
6. Danve A, Sehra ST, Neogi T. (2021). Role of diet in hyperuricemia and gout. *Best Pract Res Clin Rheumatol.* 35(4):101723.
7. Hainer BL, Matheson E, Wilkes RT. (2014). Diagnosis, treatment, and prevention of gout. *Am Fam Physician.* 90(12):831-836. Li R, Yu K, Li C. (2018). Dietary factors and risk of gout and hyperuricemia: a meta-analysis and systematic review. *Asia Pac J Clin Nutr.* 27(6):1344-1356.



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