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## The Hidden Connection between Gout and the Current Pandemic

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### Abstract

This article explores the potential common denominator amongst seemingly unrelated illnesses such as gout, malaria, certain autoimmune diseases, and even the novel coronavirus causing the current global pandemic. Evidence of this common denominator is far-reaching, some of it dating back thousands of years and encompassing both origins and treatments, including the successful treatment of some COVID-19 cases with the antimalarial drug hydroxychloroquine.

**Keywords:** Gout; Parasites; COVID-19; Sjogren's syndrome; Rheumatoid arthritis

### Introduction

Among the myriad changes COVID-19 has brought to our world in the past few months, one is a renewed interest in Plaquenil (hydroxychloroquine), an antimalarial drug commonly prescribed for Lupus and Rheumatoid Arthritis. In the often-heated debate swirling around Plaquenil's potential efficacy to treat COVID-19, several critical questions have emerged: What is the connection between two auto-immune diseases and the super-contagious novel coronavirus that has never been seen before? What is the connection, if any, between malaria and the SARS-CoV-2? And, perhaps most puzzlingly, why does malaria medication help Lupus and Rheumatoid Arthritis but none of the one hundred other autoimmune disorders like MS, Sjogren's syndrome, and Celiac disease?

I first learned about the mysterious ties between malaria medication and seemingly unrelated conditions back in the 1990s, when I was practicing in Los Angeles. One of my patients, a Korean War Veteran and Hollywood stuntman, had degenerative arthritis of the spine, which I treated with gentle spinal care techniques. He also complained of chronic knee pain resulting from an injury. I tried electrical stimulation and ultrasound treatments, neither of which had any effect. My disappointment turned to surprise when on his next appointment, he told me that his knee was better now that he was taking an antimalarial drug prescribed by his primary

doctor. Now completely flummoxed, I asked if he had caught malaria in Korea. He had not. His doctor mentioned that he sometimes got results for arthritis with the malaria drug, and my patient decided to give it a try. I was impressed.

Around that time, my mother-in-law visited us from Dusseldorf, Germany. She gave me a few magazines she had purchased before boarding her flight. As I flipped through *Der Spiegel*, an article about an archeological dig in Pompeii caught my eye. In examining the remains from the famous 74 AD volcanic explosion, scientists discovered that most of the victims' bodies contained the malaria parasite. I didn't remember hearing about that when I studied the Roman Empire in college! Was it possible that these Romans were all carriers of the mosquito-transmitted parasite? Was this an epigenetic expression?

I was reminded of this mysterious connection in 2011 when I was treating arthritic patients by eliminating food allergies, specifically, those related to nightshade vegetables like peppers, tomatoes, and eggplant. I often found evidence of a generic hidden parasite and couldn't help but think of the malaria found in those bodies from Pompeii. A few years later in 2014, I was treating patients with gout and found that my treatment for nightshade allergies was not effective; this, despite the fact that gout is a form of arthritis. I tried treating for malaria naturally, without medication, and they responded. How that is accomplished is beyond the scope of this article; but clearly, malaria was present (perhaps in the epigenetic form) somewhere in their bodies. Unfortunately, malaria in its current form remains a health crisis. In 2017, there were an estimated 219 million new cases of malaria in 87 countries. Approximately 500,000 people worldwide, primarily in Africa, die each year from malaria, even though there is a malaria vaccine.

Gout is also an ancient disease, dating back to Egyptian times, around 2500 BC, and possibly even earlier. In the fifth century BC, Hippocrates referred to it as "the unwalkable disease" due to the telltale swollen big toe. Later on, it was called the "disease of kings," most likely because the rulers overindulged in meat and drink. As it turns out, this was an astute observation. We now know that dietary causes account for about 15% of gout, specifically a strong association with the consumption of alcohol, corn syrup-sweetened drinks, and red meat. Part of the clinical picture is foods high in purines

such as dried anchovies, shrimp, dried mushrooms, and beer, which yield high amounts of uric acid.

In recent decades, gout has become increasingly more common, with approximately 9 million people diagnosed in the U.S. alone. This is believed to be due to increasing risk factors in the population, such as insulin resistance, longer life expectancy, and processed food in the diet. People who are lactose intolerant seem to experience some joint pain; other triggers include trauma and surgery. Males are affected more often.

Genetics also plays a role in gout, specifically, the SLC2A9, SLC22A12, and ABCG2 genes, due to their connection with uric acid [1]. Moreover, rare genetic disorders such as Lesch-Nyhan and medullary cystic kidney disease are complicated by gout.

That said, it is clear that neither genetics nor diet is solely responsible for gout. Gout commonly occurs in combination with other medical problems; indeed, conditions such as metabolic syndrome, obesity, hypertension, and abnormal lipid levels occur in nearly 70% of cases. Gout also complicates other disorders such as kidney failure, solid organ transplants, and polycythemia. Overweight increases the male risk of gout by threefold. Chronic lead exposure and lead-contaminated alcohol are also risk factors for gout, due to the harmful effect of lead on kidney function.

Because of the combinations of factors involved with gout, doctors disagree on the course length of medications. Short-term treatment may not be enough to prevent further complications, while long-term use of gout medication involves many side-effects [2]. There is an ongoing debate around which strategy is safer and more effective.

This brings us back to COVID-19. What is the connection between the lockdown virus and the disease-modifying, anti-rheumatic and antimalarial drug? We don't know. And in the absence of conclusive evidence, it has certainly received its share of positive and negative press [3]. One hypothesis is that Plaquenil allows more zinc to enter cells, providing an added boost to the immune system to fight off viruses. Some patients responded well to the medication, while others have not. Some patients have developed heart abnormalities as a result of taking it.

Without millions of dollars, it is impossible to approach these questions scientifically. Yet, that does not preclude us from researching the malaria-immunity connection. Results with my gout patients, although anecdotal, should certainly give us pause to think.

There is also the positive press Plaquenil does get for Lupus and Rheumatoid Arthritis; both of which may be linked by a herpes virus. My brain is tickled by a malaria (parasite) viral connection [4]. It seems entirely possible that malaria is very common, and even hidden in our genome, or collective heredity, perhaps in the "Junk DNA."

Based on my experience and research, I contend that this is the case. I also believe that the malaria parasite causes gout. Uric acid remains the primary marker for diagnosing gout; yet, while abnormally high levels of uric acid is the classic feature of the condition, nearly half the time gout occurs without hyperuricemia, and most people with raised uric acid levels never develop gout. Thus, the diagnostic utility of measuring uric acid levels is limited.

Current medications used to treat gout include Allopurinol (which reduces uric acid production), Colchicine (which reduces inflammation), Indomethacin (a strong NSAID pain reliever), and Lesinurad (which helps the body get rid of uric acid when urinating).

## Conclusion

It is my humble opinion that the pharmaceutical industry could improve its treatment of gout by addressing the underlying cause rather than just the symptoms. For example, combining antimalarial medications such as Atovaquone and Proguanil, quinine sulfate with Doxycycline, or Chloroquine phosphate, may very well prove to be more effective. As for the most effective tools for fighting the current viral pandemic, only time and many more research studies will tell.

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