

IDENTIFICATION OF A CORPSE SUFFERING FROM GOUT: A HISTORICAL CASE OF CHIRAGRA

IDENTIFIKACIJA POKOJNIKA KOJI JE BOLOVAO OD GIHTA: POVIJESNI PRIKAZ SLUČAJA CHIRAGRE

Dear Editor,

This paper describes a singular discovery of a corpse with obvious signs of chironia. On September 4, 1618, a colossal landslide destroyed the town of Piuro in the Italian valley of Chiavenna (Fig. 1). The landslide debris swept through the houses, killing more than fifteen hundred inhabitants (1). The local press reported the disaster, the hard work of the rescuers, and several cases of corpses identified by lacerations caused by the traumatic event (2). We documented an interesting case of a post-mortem examination carried out by physicians of the time. The corpse was unrecognizable, but the hands, clearly marked by chironia, allowed them to identify the victim as Lorenzo Scandola, a wealthy citizen of Piuro (3): “[...] we found him on the right bank of the river, Lorenzo Scandola who had dined [...]: still had a napkin tied to his waist, his fingers were bandaged and hands suffering from gout [...].” (4). This particular case allows us to present some considerations about this disease that has often been confused with other arthritic conditions in the past.

In the 17th century, gout was interpreted within the medical knowledge of the time. The first attestation of gout dates back to Egypt in 2640 BC (5), but a more detailed diagnosis had been described in Hippocrates's aphorisms in the 5th century BC. The Greek physician made the association between gout and lifestyle and classified the disease as “arthritis of the rich”. According to the Hippocratic humoral theory, arthropathy was caused by the deposition of drops of acrid humor in organ tissues. The definition of the cause was transformed to indicate the effect, becoming synonymous with the term gout. Medicine in classical antiquity described gout as an irregular flow of humors, both phlegm and bile.

The fluid which deposited in the body had a different nature, perhaps acrid and caustic. Later, the hypotheses regarding the pathogenic origin of gout associated it with a particular gaseous fluid, a kind of miasma, released by humors in all body tissues. During the Middle Ages, the Dominican monk Randolphus of Bocking described gout-podagra as “*gutta quam podagram vel artiticam vocant*”. He thought of gout as an excess



FIGURE 1 The Piuro landslide of 1618 in a representation from the 18th century. (Bressan D, *Documentazione storica e disastri naturali* in “Storia della geologia”, 2012).

SLIKA 1. Klizanje tla u mjestu Piuro godine 1618., prikaz iz 18. stoljeća (Bressan D. *Documentazione storica e disastri naturali* in „Storia della geologia”, 2012.).

of one of the humors that caused inflammation of the joints. In medieval times colchicum, a plant extract from the Middle East, was widely used. Despite some criticism, this substance was applied to give relief in the acute phases of the disease during the 19th century. Only in the 20th century, due to the discovery of antibiotics, colchicum was replaced by modern drug treatments.

The ancient knowledge did not distinguish gout from rheumatism (6). These diseases were confused owing to their common painful symptoms, and were referred to by the generic term arthropathy. For several centuries, the dominant medical doctrine associated joint pain caused by gout to a specific alteration of moods. Gout was considered a “humoral” disease par excellence, linked to the “dripping” of humors in the joints. The first physician who discovered the link between joint pathology and renal pathology was Paracelsus (1493–1541). He moved away from the tradi-

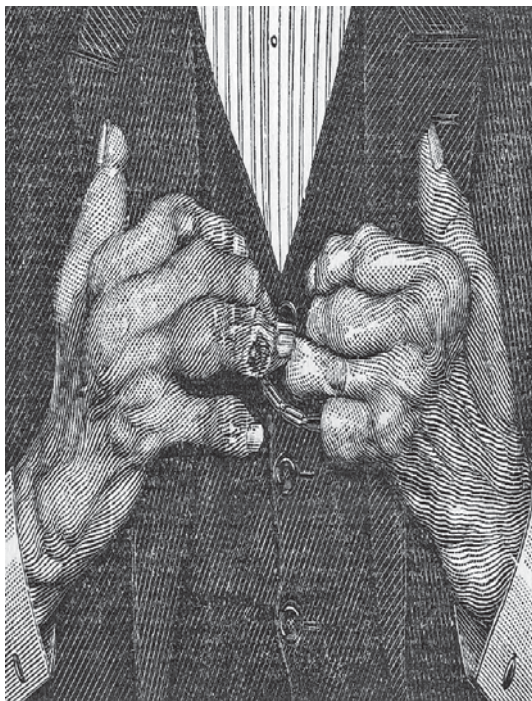


FIGURE 2 Drawing of gouty hands. (Ceconi A, *La gotta*, Minerva Medica Edizioni, 1930).

SLIKA 2. Crtež šaka zahvaćenih gihtom (Ceconi A, *La gotta*, Minerva Medica Edizioni, 1930.).

tional humoral theory and suggested that gout and kidney stones were caused by the tendency of certain individuals to retain acidic substances. In his work *De Tartaro* Paracelsus introduced his “theory of gout”. He reported that this disease was linked to the accumulation of a particular substance called tartar. He considered this substance to be the product of poisons deposited in the joints from specific foods. Later, researchers tried to explain the presence of these substances by associating them with an excessively rich diet, especially meat and wine. In the 17th and 18th centuries, Thomas Sydenham (1624–1689) and William Cullen (1712–1790) were convinced that the cause of gout must be found in the digestive tract. Different compositions of sweat or urine allowed them to distinguish acid gout from alkaline gout, both caused by a nutritional deficiency. In his *Tractatus de podagra et hydrope* (1683), Sydenham, the most famous English clinician of the time and himself a gout sufferer, presented a complete and accurate clinical description of gout to make it clearly distinguishable from other rheumatic diseases (7). At the same time, George Ernest Stahl (1660–1734) added a few important notes to the masterful and indisputable observations made by Sydenham. He gave importance to the origin of the disease, to the role of a plethoric and massive constitution of the individual, the habit of good food, anger, and strong infected souls, as well as the absence of sweating and perspiration. All modern authors believed in the importance of a healthy

digestive tract and attributed “gastric catarrh”, “abdominal plethora” or “intestinal fermentation” as the common sources of the disease. Moving away from the Hippocratic humoral theories, medicine proposed to interpret gout as an alteration of the lymphatic system, but pathological anatomy did not identify changes in the lymphatic system in those who had died from gout.

During the early 19th century Giovanni Maria Scavini (1761–1825) (8) devoted himself to the study of gout. He believed that the fibrous system was the primary site of the disease.

Charles Scudamore (1779–1849) claimed that arthritic disease depended on an overabundance of blood in the portal venous system or on functions and secretions of the liver and digestive system. Consequently, the use of purgatives was often recommended in the treatment. In his *Treatise on the nature and treatment of gout*, the author analyzed many cases of gout and offered one of the first contributions to the study of the changes in a body suffering from gout (9). Only in the second half of the 19th century, medicine began to realize that there was an excess of sodium urate in the blood of the gouty and that the deposit of uric acid in joints and in different organ systems was the cause of both gouty attacks and other extra-articular manifestations of the disease. In 1860, Alfred Baring Garrod (10, 11) developed the ingenious “thread test”, by which he demonstrated the presence of high concentrations of uric acid in the blood of the gouty for the first time. The presence of uric acid in the blood was correlated to an alteration of kidney function. Beside his work on gout, Garrod made important contributions to the elucidation of other pathophysiological problems as well.

In addition to the study of historical medical sources, the analysis of ancient human remains, both from archaeological contexts and museum collections (12, 13), testifies the knowledge of gout since ancient times (14).

It has always been common belief that a comfortable and inert lifestyle encouraged the disease, while physical exercise was a good remedy, better than many medicines. This is illustrated in La Fontaine’s fable about the gout and the spider: “[...] The gout initially settled in a farmer’s big toe, sure that no physician would worry about curing a poor man simply to send her (*the gout*) away. But the farmer, “silly and rude”, mistreated her: he led her into the woods to cut firewood, to the fields to plow, stamped his foot on the spade, and did not allow her to rest [...]. Then, agreeing with the spider, which had experienced a similar treatment, the gout changed residence. She went to burrow into the foot of a great lord who made excessive use of fatty foods and alcoholic beverages. The lord did not notice her presence immediately, but due to the pain he began to stay in bed and to spoil her with poultices, oint-

ments, and a thousand kindnesses, so that her life became the most comfortable and the most charming of all” (15).

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