The historical analysis of rheumatology basically developed around gout and rheumatoid arthritis (RA), mainly because until the nineteenth century, all rheumatic conditions were called gout (this blanket term also included diseases that had nothing to do with gout) and because the question mark over the late appearance of RA in the Old World is a topic currently the subject of debate [1–4].

These rheumatic conditions and spondylarthritides have affected emperors, kings, politicians, religious leaders and artists, among others [5]; they probably contributed to the fall of the Roman Empire [6], to epidemics of gout in the well-to-do of the British Empire since the sixteenth century [2], and to American independence [7]. These so-called epidemics of gout are explained by the Roman custom during antiquity of preparing food and wine in receptacles made of lead, which caused lead poisoning and gout [6] and by the Navigation Act (1659) passed by the English Parliament to combat commercial competition by the Dutch fleet. This banned the importation of French wines, a cargo not carried by the British, in favour of Spanish and Portuguese wines, in particular port, which was particularly rich in lead [7, 8]. This may explain the large number of people suffering from gout seen in caricatures of the time and also the attack of gout that prevented the Prime Minister William Pitt (1708–1778) from attending Parliament for the vote on taxing tea originating in the New World [7, 8]. If these attacks of gout had not happened, perhaps the face of the world would have been different? A gallery of people suffering from gout is found not only in England [2] but also in France, where it is said that 20 of the 34 kings (Capet, Valois and Bourbons) suffered from gout [9]. Moreover, easy chairs and footwear were specially made to help sufferers [10].

But rheumatic conditions have had repercussions other than political as they have influenced artistic output. The rheumatoid arthritis that struck Peter Paul Rubens (1577–1639) probably had an impact on his creativity up to a point, since he seems to have represented the evolving course of his rheumatism with its swellings and deformities, on some of his canvasses [11]. Dufy also suffered from rheumatoid arthritis and was one of the first to be treated with cortisone; did he not call cortisone one of the most colourful of his canvasses [12]?

The scleroderma of Paul Klee offers an explanation for the changes of theme (more sombre), form (distinctly more contracted) and colour (much more sombre, drawing on black and brown) of his canvasses at the end of his life [13].

In the domain of literature, several writers and dramatists have also been affected by their rheumatic conditions, which they have made the theme of their works, or the suffering or its treatment have influenced the style or the content [14]. A popular legend has it that the goddess Podagre (Gout) was born through the seduction of Aphrodite by Dionysos (the Greek god of wine); the Iliad reports that the Trojan Anchises began to limp after having been struck by a thunderbolt from Zeus [1, 15]. Erasme of Rotterdam (1466–1536), the great writer and European humanist of the Renaissance, probably suffered from spondylarthritis; he often refers to his rheumatism in his correspondence [16]. Paul Scarron (1610–1660), considered to be the initiator of the burlesque style, was severely affected by a spondylarthritic condition that affected the peripheral joints and was probably complicated by iritis. He chose to deride his health and his suffering; even in his epitaph, he poked fun at the swollen joints that tormented him [14, 17]. Arthur Conan Doyle wrote about non-arthritis gout in the journal The Lancet with the same minuitiae of observation as his hero Sherlock Holmes [18].

From its origins in arguments of greater or lesser relevance, the historical analysis of rheumatology is gradually advancing to more or less well-founded and convincing hypotheses. The processes are in the majority of cases based on a scientific approach since we can very often proceed with the reasoning of the clinician and compare findings with those of experts from other disciplines; this has resulted in conclusions that could not have been imagined at earlier times. Tackling the problem in a multidisciplinary mode, the lack of available information and the possibility of calling on sophisticated techniques link the approach of doctors with that of police officers.

There is a multiplicity of source documents: ancient texts, chronicles, papyrus, the Bible, correspondence, plays and old medical books that bear analysis not only under the doctor's microscope but also from the perspective of the historian. This approach enables us to reconstruct a medical history after the event, the first step towards the diagnosis. For example, an analysis of the genealogy of the Medicis, Florentine art patrons of the fifteenth to seventeenth century, has enabled us to investigate a series of rheumatics that includes Cosimo, Piero the Gouty and Lorenzo the Magnificent. It is interesting to record that the majority are male members of the family and that Cosimo is represented by Pontormo in one of his paintings as having a stiff neck. This supports the hypothesis that rheumatism may not be the same as gout—the term used to denote all forms of rheumatic conditions until the nineteenth century—but spondylarthritis, which has been confirmed by the radiographic analysis of exhumed skeletons [19]. Another example shows how reading passages from the Bible about Moses (who seems to have suffered from rheumatism) correlates with an examination of radiographs taken of the vertebral column of Ramses 2, who is thus shown to have had ankylosing spondylitis. This provides an additional argument in support of Freud, who claimed that Moses was of Egyptian origin [20].

The physical examination is the second stage of a diagnosis. It is sometimes possible to suspect rheumatic deformities when certain drawings, sketches, designs or paintings are examined, but the analysis and the conclusions must be made with extreme prudence to avoid the trap of the purely stylistic representation [11]. The curved position of the wrist and the partially flexed fingers on Botticelli’s tableaux may not be interpreted as rheumatic deformities but are purely stylistic [21]. Nevertheless the more realistic style of the Flemish Primitives of the sixteenth and seventeenth century permits a cautious medical interpretation; several of these artists have represented swollen and/or deformed
joints suggesting that they were aware of patients suffering from polyarthritis [22].

Although rheumatoid arthritis may be a condition that appeared recently in the Old World (the first description of it dates back to the end of the eighteenth century), it probably existed in America before that. It may have been imported by the sailors of Christopher Columbus and, in these conditions, the ports of the Spanish Netherlands (including those of the present-day Belgian Flanders) could have been a way in; this might explain why the Flemish were among the first to depict the disease. Caution is nevertheless essential to avoid medical over-interpretation for hands that are only pure realizations of style.

Realistic sculpture (Figs 1 and 2) may also be a source of information: on an Egyptian bas relief from Armana, the blind harpist is elderly and wasted; his face is emaciated and the temporal artery is prominent; what is to say he was not suffering from temporal arteritis [23]?

As in modern medicine, medical imaging also has a place. The three-dimensional CT scan of a Peruvian mummy seen by Herge during a visit to the Royal Museum of Art and Historical Analysis in Brussels, that he later named Rascar Capac in the Tintin cartoon The Temple of the Sun, revealed an abnormality of the lumbosacral joint with reactional sacroiliac arthritis [24]. On the other hand, nuclear magnetic resonance imaging has not yet found its place in the analysis of human remains because they usually no longer contain any water.

Autopsy is an approach that can be applied to the investigation of traces of rheumatic conditions in the past. This brings in historical epidemiology [25, 26]; thus the visual examination of bones has enabled traces of symmetrical erosive peripheral polyarthritis to be discovered in indigenous people from Alabama whose remains are more than 3500 years old [27]. Other techniques, such as genetic analyses [28], have also found their place.

In conclusion, the historical investigation of rheumatology is multifaceted and has a bright future; in addition to its primary mission which is to honour its pioneers, it makes a posteriori diagnoses, leads to historical epidemiology and tackles the particularly pertinent question ‘will rheumatoid arthritis disappear?’ [29]. This question is raised because some rheumatic conditions have disappeared or their characteristics have changed, others have appeared recently. It could bring up to date obsolete or forgotten therapeutic approaches, explain some behaviour and turning points in the course of historical analysis affected by factors other than war. If the approach is rigorous, it may be able to claim its rightful place in the development of the rheumatology of tomorrow. This is more than a challenge, it is its objective!

References