Rheumatology has come a long way since its origins. Rheumatic conditions are some of the oldest recognized conditions in human and animal remains all around the world. They have been recognized and managed by all medical traditions, even before Hippocrates. Hippocrates wrote on gout and other ill-defined rheumatic conditions, and mentioned for the first time the existence of synovial fluid (1). Since his teachings, the dominant paradigm in Occidental medicine was the humoral theory. It is based on the existence of four different humors in the body: blood, phlegm, yellow and black bile. The predominance of any of them was considered as one of the main determinants of the temperament and of the possible diseases to which any person could be exposed (2). These were not the only important influences to determine the health of a person or of a population. The specific characteristics of the soil, the waters and the direction of the wind had to be considered too when making a diagnosis, a prognosis and in planning a treatment (3). The planet’s influence was also very important, and in some cases it was considered as determinant of the fate of a patient (4).

On arriving to the New Continent, Spanish conquerors were amazed by the plants, the animals and the people they found and their advanced civilizations (5). They found that Aztec physicians were superior to their own physicians for the treatment of some ailments, such as wounds and some unspecified chronic conditions (6). Aztec physi-
cians had a profound knowledge on herbal remedies, and Spanish physicians made their best efforts to integrate this knowledge in their practice, adapting some of the medical concepts of Nahuatl physicians to their own structure of thought (7). In the first years after the conquest, Dr. Francisco Hernández, personal physician to the king of Spain, was sent to New Spain in a scientific expedition to investigate the medical properties of the different herbs and animals existing in the country (8). Nicolás Monardes, a Spanish physician who never visited America, was responsible for the popularization of the diverse herbal treatments through Europe (9). This blending of two medical systems was notorious in the hospitals founded in diverse cities of New Spain to attend aborigin population. These hospitals were also found in other Mexican regions, such as Michoacán, Misco, Tlaxcala, Oaxaca, Puebla, and Mexico city among other places.

THE HOSPITAL

The Hospital Real de San Josef de los Naturales was an example of these interesting institutions. Prince Philip, the future Philip II of Spain, ordered its foundation on May 18, 1553. It was designed to attend aborigin population only. There were many of such hospitals in New Spain, and they were founded on the base that aborigins were humans, not animals, as was the initial conception of some of the conquerors (10). Since they were men, they could not be allowed to suffer or die without help from their fellow men. They were not equal on the eyes of the law, but they had rights. The declared functions of these hospitals were to alleviate their pains, to cure their diseases and to proportionate spiritual help during their last transit. The Hospital of Saint Josef functioned with eight wards, separating contagious patients from the rest. When the patient arrived, he was assigned to one of three different sections, surgery, medicine or contagious conditions, according to the suspected nature of their disease (11). Four physicians, four surgeons and ten practitioners attended the hospital. Surgeons visited the wards from 6 to 7 in the morning, physicians visited them from 7 through 9. During the visit, they made the pertinent prescriptions and indications on the diet to be followed. Food was served at 8, 11:30 and 20 hours. In the morning and depending on the specific indications given during the morning visit, they served atole, champurrado or chocolate. Atole is a beverage prepared with grinded corn and milk, and adding chocolate and water it becomes champurrado. These are still considered as nutritional supplements specially effective for restoring strength and beneficial to convalescents by Mexican patients. Chocolate was also considered to have special medicinal properties, although how beneficial it could be to ill persons was a matter of ardent debate in America and Europe (12). It was not prepared as we are now accustomed to drink it. It was not sweetened, and sometimes chilli was added to it. At noon, the meals included lamb with chickpea, fried hen, rice, bread and tortillas, which are the base of Mexican food. No beef was served because it was not considered appropriate food for sick people. During the sixteenth and seventeenth centuries in New Spain, beef was considered as a low quality food, and only poor people consumed it. If indicated by physicians, a special diet based on wine and dry cookies was served. The different prescriptions were a blend of European and Mexican herbs and practices. This is clearly exemplified by the inclusion of temazcalas, which is a sort of sauna bath employed by Nahuatl populations as a therapeutic measure for rheumatic diseases, for fevers and to restore strength (13).

All the attending physicians had to be trilingual fluent speakers. Besides speaking Spanish, they had to dominate Otomi and Nahuatl, which were the main languages spoken in the geographical zones covered by the Hospital. Between 1600 and 1799 the Hospital could hold between 200 and 580 patients. If a patient happened to die, he was buried in the Hospital’s cemetery. The cemetery was disinterred in the 90’s, and we had the opportunity to search for rheumatic conditions in the recovered human remains (14). We found several cases of osteoarthrosis, diffuse idiopathic skeletal hyperostosis, spinal tuberculosis, septic arthritis, and ankylosing spondylitis among other non-rheumatic conditions. Although we found no cases of gout nor rheumatoid arthritis, these must have been present in the Hospital’s population, since they were known to Alonso López de Hinojosos, one of the attending physicians during the sixteenth century. It just happened that either they were not hospitalized due to the recurrent nature of the diseases, or if they were, they did not happen to die while hospitalized. Given the interesting descriptions of diverse rheumatic conditions found by López de Hinojosos during his practice in this hospital, we will discuss his writings.
ALONSO LOPEZ DE HINOJOSOS
AND HIS BOOK

Alonso López was born in Los Hinojosos del Marquesado, a town in Cuenca, Spain. The precise date of his birth is unknown, although it should have been between 1534 and 1535. We have no firm information about his early years, neither his passage through the Universities of Spain. We are certain that by 1567 he was already in New Spain, as a practicing physician and surgeon. He was a very competent physician, as testified by one of his contemporaries, Dr. Juan De la Fuente, protomedic of New Spain.

There was no need to have passed through a medical faculty in any University to be recognized as a physician or surgeon in New Spain. The requirements, due to the lack of prepared personnel available, were some years of practice under the tutorship of a licensed physician, to present an examination before the assembly (Protomedicato) named by the Viceroy of New Spain, and to approve it. They were also required to read the official texts employed in medical schools in Europe, such as Hippocrates, Avicenna, Dioscorides and Galen. So, the rheumatologic concepts in sixteenth century medicine in Europe and New Spain were based on their teachings.

Dr. López served as one of the four physicians ascribed to the Hospital Real de San Josef de los Naturales, in Mexico city. During one of the typhus epidemics in Mexico city during the sixteenth century, he practiced some of the first autopsies in New Spain with dr. Francisco Hernández (15, 16). López de Hinojosos married twice, and after the death of his second wife, he entered the Company of Jesus in 1585 in the city of Puebla. He died of an acute abdomen in 1597. Unfortunately, we have no portraits of him.

The complete title of his book is “Summa y recopilacion de chirurgia, con un arte para sangrar muy util y provechosa”, whose approximate translation is “Summa and recopilation of surgery, with a most useful and beneficial art of bleeding”. The first edition appeared in 1578 and the second in 1595, and although it was the second medical book published in the New Continent, it was the first published in Spanish language (Fig. 1). The first medical book published in the New Continent was also published in México in 1570, and it was the “Opera medicinalia” by Francisco Bravo, written in Latin (17). López de Hinojosos’ book is divided in seven treatises. The first one is about anatomy. The second deals with therapeutic bleeding. The third about abscesses, the fourth about wounds, the fifth about diverse tumours and inflammations, the sixth on fractures and dislocations, and the seventh treatise deals with plague. It is in the fifth treatise where he deals with the diverse kinds of gout he has seen during his practice. He presented for the first time the association between a venereal disease with joint and ocular affection, now known as Reiter’s disease (18). He also made the clinical distinction between chronic gout and rheumatoid arthritis, more than one hundred years before Sydenham’s (19, 20). López de Hinojosos also mentioned the association of joint disease with erythematous skin lesions. He named the condition as “gota rosada”, although due to the scarcity of data mentioned in the text no differential diagnosis can be made between rheumatic fever, systemic lupus erythematosus and other conditions presenting with erythematous lesions on the skin (21).

López de Hinojosos’ contemporaries also wrote about rheumatic conditions. In several medical texts from sixteenth through nineteenth century in México we can find descriptions of several rheumatic diseases and diverse treatments, including the earliest indication of therapeutic arthrocentesis (22). Our conception on how profound was the knowledge achieved by our predecessors on rheumatic diseases must be reconsidered. These and other contemporary texts deserve much more attention by medical historians. For instance, no comparisons exist on the classification, diagnostic criteria and treatments employed for rheumatic
conditions between different contemporary medical traditions, such as Spanish or Italian medicine and British medicine during seventeenth and eighteenth centuries.

**CONCLUSION**

Rheumatic diseases were identified as specific problems in sixteenth century medicine.

**SUMMARY**

The rheumatic conditions found in New Spain during the sixteenth century were not different from those seen in Mexico in present times. We present the humoral conceptions on which medical theory was based in those times, and the contributions made by Alonso López de Hinojosos during his practice in the Hospital Real de San Josef de los Naturales, in Mexico city. Among them were the clinical distinction between gout and rheumatoid arthritis more than one hundred years before Sydenham, and the identification of arthritis and ocular affection associated with a contagious disease more than three hundred years before Reiter. We conclude that the analysis of ancient medical traditions is an interesting and fruitful enterprise.

**Parole chiave:** Malattie reumatiche, storia, storia della medicina.

**Key words:** Rheumatic diseases, history, history of medicine.

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