

The "Hospital Real de San Josef de los Naturales" and the rheumatic conditions found in New Spain during sixteenth century

L'"Hospital Real de San Josef de los Naturales" e le malattie reumatiche nella Nueva España (Messico) durante il XVI secolo

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RIASSUNTO

Le malattie reumatiche che affliggevano le popolazioni della Nueva España nel periodo coloniale (XVI secolo) non erano diverse da quelle che si possono osservare oggi nel Messico. In questo studio vogliamo presentare le basi concettuali della medicina di quel tempo, che si sostanziano nella tradizionale teoria degli umori, ed i contributi di carattere reumatologico di Alonso López de Hinojosos nel corso della sua attività presso l'"Hospital Real de San Josef de los Naturales" di Città del Messico. Fra questi, degni di menzione sono la distinzione fra gotta ed una forma di artrite che oggi probabilmente classificherebbero come reumatoide, oltre un secolo prima di Sydenham, e l'identificazione dell'associazione fra artrite ed oftalmopatia di natura infettiva, più di trecento anni prima di Reiter. Tutto questo ci porta a concludere che lo studio della medicina tradizionale, nelle sue radici storiche, non è certo privo di interesse culturale e di utilità.

Reumatismo, 2002; 54(1):62-66

RHEUMATOLOGIC KNOWLEDGE IN THE SIXTEENTH CENTURY

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, yel-

low 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-

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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 could it 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 *temazcales*, 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 osteoarthritis, 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 chirugia, 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



Figure 1 - The 1578 edition of López de Hinojosos’ book.

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 erithematous 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.

Some of the treatments employed then are still in use by modern Mexican patients, although their effectiveness has not been demonstrated (23-25). Although rheumatology emerged as a medical speciality in the last century, the evolution of the diverse practices dates from ages before.

The history of the diverse conceptions on the etiology and treatment of rheumatic diseases is an interesting and productive area of research.

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.

REFERENCES

- Rodnan GP, Benedek TG, Panetta WC. The early history of synovia (joint fluid). *Ann Intern Med* 1966; 65: 821-42.
- Burton R. The anatomy of melancholy. Dell F, Jordan-Smith P (eds), Tudor Publishing Company, New York 1941 (Original edition: Oxford, 1628).
- Cisneros D. Sitio, naturaleza y propiedades de la Ciudad de México. Fundación de Ciencias de la Salud/ Sociedad Estatal Quinto Centenario, 1992 (Original edition: 1618)
- Martínez H. Reportorio de los tiempos e historia natural de Nueva España. Editorial Novum, México 1991 (Original edition: 1606).
- Gerbi A. La naturaleza de las Indias Nuevas. Fondo de Cultura Económica. México 1992.
- Díaz del Castillo B. Historia de la conquista de Nueva España. Editorial Porrúa, México 1992.
- Somolinos d'Ardois G. La fusión indoeuropea en la medicina mexicana del siglo XVI. In: Historia General de la Medicina en México, Aguirre Beltrán G, Moreno de los Arcos (eds), Vol. II, 1st. Ed. Academia Nacional de Medicina/ Universidad Nacional Autónoma de México, México 1990.
- Hernández F. Historia natural de Nueva España. Vols. I and II, Universidad Nacional Autónoma de México, México 1959 (Originally written between 1571-76, and published in 1790).
- Monardes N. Herbolaria de Indias. Edition prepared by Denot E and Satanowsky N, Instituto Mexicano del Seguro Social, México, 1990 (Original edition: 1574).
- Méchoulan H. El honor de Dios. 1st. Ed. Argos-Vergara S.A., Barcelona, 1981.
- Muriel J. Hospitales de la Nueva España. Tomo I. Fundaciones del siglo XVI. Universidad Nacional Autónoma de México/ Cruz Roja Mexicana, 2nd Edition, México, 1990; 127-48.
- Coe SD, Coe MD. La verdadera historia del chocolate, Fondo de Cultura Económica, México, 1999.
- Clavijero FJ. Historia antigua de México. Editorial Porrúa, México, 1982.
- Aceves-Avila FJ, Báez-Molgado S, Medina F, Fraga A. Paleopathology in osseous remains from the 16th century. A survey of rheumatic diseases. *J Rheumatol* 1998; 25: 776-82.
- Fernández del Castillo F. El tifus en México antes de Zinsser. In: Florescano E, Malvido E (eds). Ensayos sobre la historia de las epidemias en México. Vol. I. 1st. Ed. Instituto Mexicano del Seguro Social, México, 1982.
- Alcántara S, Alonso M. Introducción. In: Trabulsee E (ed), Historia de la Ciencia en México, Vol. I. Siglo XVI. Conacyt/ Fondo de Cultura Económica. México, 1985.
- Bravo F. Opera medicinalia. Instituto Nacional de Antropología e Historia/ Benemérita Universidad Autónoma de Puebla, México, 1994 (Original edition: 1570, México).
- Aceves-Avila FJ, Medina F, Moreno J, Fraga A. Descriptions of Reiter's disease in Mexican medical texts since 1578. *J Rheumatol* 1998; 25: 2033-4.
- Sydenham T. The works of Thomas Sydenham M.D.,

- translated from the Latin edition of Dr. Greenhill, with a life of the author by R.G. Latham, The Classics of Medicine Library, Gryphon Editions, Ltd. Birmingham, 1979.
20. Aceves-Avila FJ, Medina F, Fraga A. The antiquity of rheumatoid arthritis: a reappraisal. *J Rheumatol* 2001; 28: 751-7
 21. López de Hinojosos A. Suma y recopilación de cirugía con un arte para sangrar muy útil y provechosa. Academia Nacional de Medicina, México, 1977; 190-1 (Original edition:1578, México).
 22. Aceves-Avila FJ, Delgadillo-Ruano MA, Ramos-Remus C, Gómez-Vargas A, Gutiérrez-Ureña S. The first descriptions of therapeutic arthrocentesis: a historical note (submitted for publication).
 23. Ramos-Remus C, Gámez-Nava JI, González-López L, Skeith KJ, Perla-Navarro AV, Galván-Villegas F, Suárez-Almazor ME. Use of alternative therapies by patients with rheumatic diseases in Guadalajara, México: prevalence, beliefs and expectations. *Arthritis Care Res* 1998; 11: 411-8.
 24. Ramos-Remus C, Gutiérrez-Ureña S, Davies P. Epidemiology of complementary and alternative practices in rheumatology. *Rheum Dis Clin North Am* 1999; 25: 789-804.
 25. Aceves-Avila FJ, Medina F, Fraga A. Herbal therapies in rheumatology: the persistence of ancient medical practices. *Clin Exp Rheumatol* 2001; 19: 177-83.