Pedro de Horta and the First Book of Epilepsy from Latin America

On September 7, 1754 in the town of Puebla (meaning in nahuatl the place where the water becomes red), 150 km east of Mexico City, Alexandra Beatriz de los Dolores, prioress of the convent of the religious order of San Jerónimo, sent a letter to her confessor Gaspar Antonio Mendez de Zisneros informing him of the situation of 15 nuns who had been afflicted by severe convulsions for up to 12 years. The prioress described the signals and symptoms that the nuns underwent during the seizures. The incidence of the seizures was higher between 1750 and 1754, a situation that suddenly disappeared after the nuns had prayed to the Virgin of Guadalupe for a miracle. At the request of the prioress, a report was written by Pedro de Horta entitled Informe Médico Moral de la Penosissima y Rigurosa Enfermedad de la Epilepsia (Figure 1).
The report was printed in 1763 by Domingo Fernandez de Arrojo in Madrid (Figure 2). Pedro de Horta was a Spanish physician who moved to Mexico at the middle of the 18th century. He obtained his licence to practise medicine from the “Real Tribunal Protomedicato” of New Spain. He was the physician-in-chief at the Hospital Real del Señor San Pedro and at the Convento de Señoras Religiosas Capuchinas in Puebla.

In his Medical-Moral Account, de Horta divided the abnormal movements, improperly known as “telele” or “tembeleque”, as follows: a) epilepsy: “forced, involuntary preternatural, violent, convulsive shaking of the nervous (system)-membranous-muscular parts of the whole body, with
loss of consciousness”; b) convulsive movements: “spasmodic wandering movements continuously changing their location in the body, not associated with loss of consciousness, which originate in the nervous membranes around the joints and secondarily propagated to meninges of the brain and spinal cord”; c) infrequent spasmodic movements: “muscular contractions specially of limbs, not associated with loss of consciousness that are induced by irritation of meninges of spinal cord and nerves”. Epilepsy was also classified as hereditary or nonhereditary, accidental, idiopathic and sympathetic.

The causes of epilepsy were divided into immediate and remote. The immediate causes of epilepsy were disturbances of body functions. They were classified as follows: a) hereditary nature; b) congenital disposition, c) damage to the brain and its membranes by factors such as tumors, cartilaginous changes of the venous sinuses, infections, etc., d) association of hereditary or congenital weakness with conditions that increased influx of liquids toward the brain; e) violent affects of nervous type such as severe pain; f) retention of biological fluids (urine, menstrual blood, lochia, semen); g) vapors and miasmas ascending to the brain; h) diseases such as malaria; i) presence of fever or infections; j) other situations such as mood alterations and lack of sleep.

The remote causes were situations that make the body susceptible to epilepsy, but themselves are insufficient to produce it, such as abuse of unnatural things, the character, the natural disposition, the origin of the person, deprivation of sleep, and other conditions that could produce acute or chronic diseases that finally result in epilepsy. In this case, de Horta indicated that convulsions could also result from the toxic effects induced by herbs, animals or minerals applied for magic purposes. The duration of the epilepsy induced by remote causes - the most difficult to treat - can be short or long continuous or periodical, frequent or seldom. The periodicity of the convulsions was associated with events such as the Moon stations, weather situation, mood changes, exhaustive meditation or ingestion of alcoholic substances.

The causes of epilepsy were also classified as natural, “sobrenatural” and “transnatural”, the latter two associated with demoniac sources. Pedro de Horta extensively emphasized the role of the physician to investigate and treat the natural causes of epilepsy before considering “sobrenatural” and “transnatural” causes. He described the signs and symptoms associated with the aura, the ictal and postictal periods. However, he rejected that the ability to talk or understand an unknown language by the patient during the postictal period could be associated with epilepsy of natural causes.

Concerning therapy for epilepsy, de Horta used the term “antiepileptic” and he suggested treatments that should be applied during the attack (stimulation of the body, especially the feet, focused on recovering the person’s consciousness and reduced the attack) and during the postictal and interictal intervals. Depending on the cause of epilepsy, he recommended sedatives, distillation of fragrant flowers, bloodlettings, purgatives, emetic agents, anodynes, narcotics, antihysterical agents, caustic substances, diuretics, opiates, diuretics, etc. He focused on preventing subsequent convulsions by trying to restore the normal functions.

Although de Horta established that epilepsy and convulsions are difficult to treat, especially in people most likely to suffer them, but that their cure is not impossible. He described different prognoses of epilepsy, depending on the cause. At this point, he established that epilepsy is incurable when associated with a hereditary predisposition or brain damage induced by tumors or venous malformations. In contrast, epilepsy could be medically treated when it appears before and during the puberty. Interestingly, he indicated that infants are more susceptible to presenting convulsions. de Horta established that the prognosis is poor if the epilepsy induces blindness, reduced memory or stubbornness; moreover, decreased cerebral functions could be induced if the patient with epilepsy becomes old.

In the last part of his book, de Horta extensively described the treatment by exorcisms of epilepsy induced by “transnatural” causes. He indicated that this type of epilepsy is normally resistant to medication. In addition, he indicated that the antiepileptic drugs, such as narcotics and opiates, may induce secondary undesired effects in patients with this type of epilepsy, and eventually they
Pedro de Horta described the personality of epileptic patients in which mood alterations facilitate seizures. He also distinguished true epileptic seizures from non-epileptic seizures (pseudoseizures), the latter attributed to demonic forces. Indeed, de Horta suggested that people dedicated to spiritual exercise, such as nuns, are more susceptible to presenting epileptic attacks induced by the devil and that the application of exorcisms is the best strategy for their treatment. At this point, he emphasized the necessity to discover and treat the possible natural causes of epilepsy by the physician, before calling for the confessor to treat the moral causes.

He established that the "pseudoseizures" are associated with mental disorders (melancholy, hysteria, maniac alterations) or with some types of personality (compulsive or shy). Although he placed emphasis on the evaluation of these disorders in order to avoid erroneous diagnosis, he indicated that some mental alterations (hysteria, maniac disorder, melancholy) could be associated with epilepsy.

It is clear that the nuns of the religious order of the Hieronymites underwent "epilepsy" as a consequence of collective hysteria because they were suddenly cured one day after they had prayed to the Virgin of Guadalupe (Figure 3).

Figure 3: Page in which Pedro de Horta dedicated his book to the Mexican Virgin of Guadalupe.

C. Reseña Calva-Rodriguez (2004) indicated that this was a common situation where people were incommunicado and endured long periods of starvation, as was the case in Mexican convents during the 18th century. However, this incident resulted in the first manuscript about epilepsy that was written in the New World. In this book one can find very interesting descriptions that reveal the scientific attitude of the author to explain epilepsy according to: a) the role of the physician to treat and prevent further seizures; b) a clear classification of the seizures; c) the identification of natural causes of epilepsy; d) the treatment of seizures using traditional medicine and drugs such as narcotics and opiates; e) the prognosis of epilepsy; f) the association of epilepsy with mental disorders; and g) the identification of pseudoseizures. Certainly, the treatments recommended by de Horta are in great contrast with the crude actions recommended by priests in
other countries at that time, such as Inquisitional interrogation and burning those who suffered convulsions.

The deficiency of Galenic concepts throughout the Medical-Moral Account supports the use of new medical concepts by Pedro de Horta. Although medicine in New Spain during the 18th century was influenced by superstition and magic, there was a group of physicians that introduced new ideas about physiology, anatomy, surgery and pathology, as well as the use of instruments such as the microscope and thermometer. Important schools for physicians were founded, such as the Escuela Real de Cirugía in 1768. Interestingly, the medical literature was extensive at that time. This situation, in parallel with the advance of different sciences in New Spain (astronomy, mineralogy, metallurgy, zoology, botany), could explain the advanced concepts used by de Horta to explain epilepsy. He supported his theories on the ideas of modern authors such as Hemann Boerhaave (1668-1738), a Dutch humanist and physician of European fame and considered the founder of clinical teaching and of the modern academic hospital. Important Spanish books preceded the Medical-Moral Account of Pedro de Horta. The Liber Deaffectionibus Puerorum is a treatise on pediatry with a chapter dedicated to the description of epilepsy in children, written in 1611 by Francisco Perez-Cascales. The Praelectiones Vallisoletanae, considered the first Spanish treatise on epilepsy, was written in 1631 by Antonio Ponce de Santa Cruz.

In addition to natural causes to explain epilepsy, Pedro de Horta also propounded non-natural or "moral" causes in order to explain the pharmacoresistant epilepsy and pseudoseizures that should be treated by the confessors applying exorcisms. It is possible that this last situation helped the favorable reception of the book by the Catholic authorities. At present, a copy of Pedro de Horta’s book is located in the “Palafoxiana” Library in the centre of Puebla, a beautiful building that contains several ancient books written by scientists from the old Mexico.

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References

