

AZTEC MEDICINE.

To the Editors of the UNIVERSITY MEDICAL MAGAZINE.

GENTLEMEN :—I have read with a good deal of interest a work on "*La Historia de la Medicina en Mexico desde la Época de los Indios hasta la Presente*" (History of Medicine in Mexico from the times of the Indians to the present Epoch), by one of the brightest young writers and philosophers of our sister Republic, Francisco A. Flores, a medical student. The work shows labor and intelligent research, it teems with interest, and its merit, on the whole, is beyond my power of expression. Once more we are called upon to admire the wonderful civilization of those people that at one time inhabited "beautiful Anahuac," the pearl of the American Continent. The subject is of a highly peculiar interest, as it deals with the origin, development and growth of truly American Medicine.

I regret that lack of space, perhaps, will prevent me, in reviewing the book, from doing full justice to Mr. Flores' work. I will, nevertheless, endeavor, in as

few words as possible, to give the readers of your Magazine an idea of the subject which, in itself, is of the highest importance from a historical and a philosophical point of view.

The book, which is in three large volumes and written in the Spanish language, is preceded by an ably prepared introductory notice from the pen of Dr. Porfirio Parra, the living Mexican representative of the modern French School of Philosophy known as Positivism. The work is published under the auspices of the Mexican Government, and is, to say the least, a valuable contribution to our continental medical literature.

The author divides his work into three periods: the first, or *Theological Period*, which dates from the remotest epoch of ancient Mexican history to the year 1521; the second, or *Metaphysical Period*, from 1521 to 1833, which comprises the three hundred years of the Spanish dominion and the first twelve of National Independence; and the third, or *Positive Period*, from 1833, in which the modern National School of Medicine was definitely established, to the present time.

The first volume—perhaps the most interesting from a historical point of view—is devoted to the Theological Period. In it the author studies the evolution of Aztec medicine, which was adapted principally to the religious notions and ideas characteristic of that peculiar and otherwise highly intelligent people. Of course, medicine among the Aztecs was then (as was the case with the first civilized nations of the Old World) a heterogeneous mixture of fable, superstition and real knowledge—the outcome of the theogeny of the primitive times of the human race.

The volume is divided into four parts: The *first* deals with education in general and with medical teaching; the *second* with the practice of medicine proper; the *third* with the history and state of the allied sciences and of the different medical branches; and the *fourth* with the relations that medicine bore to law and authority. Each part again is divided into chapters and under each one of these is given the history of the particular subject of which it treats. In Chapter I the author tells us how general education was diffused among the Aztecs. From the most elementary to the higher—and which may be called preparatory instruction—all received due attention, and was imparted especially by the priests, in the colleges and seminaries built alongside of the temples; for it must not be forgotten that the foundation of all teaching among these Indians was principally of a religious character and tendency.

The primary branches comprised notions of history, painting, music and the arts, according to the social standing of the pupils. Gradually philosophy, literature, history and mathematics were taught.

The mechanical arts, of which the instruction of the humbler classes consisted, bore, as it were, a hereditary character, and were handed down from father to son, a reason why said arts attained among those people such a high degree of perfection, as evinced in the silver, mosaic, feather and other delicate works,—works which the most intelligent artists, even at the present time, have been unable to rival.

The scientific professions were considered sacred, and thus the privilege of

following them was tendered only to the higher classes. Instruction was given, under the guidance and immediate supervision of the priests, who, among the Aztecs, were the most learned. Notwithstanding this fact, the teaching of medical science was both sacerdotal and hereditary, and thus it was that more commonly father physicians made physicians of their children and guided these afterwards in the practise of the healing art.

The chief foundation of medical teaching and study were pathology and therapeutics. In the first instance, teachers studied and endeavored to impart the knowledge of disease in its various manifestations and the different degrees of the same affection, so that the use of hygienic measures, and of drugs whose virtues were handed down by traditional empiricism and sometimes through actual experimentation, would be productive of the most favorable results. After such studies, pupils were taught the different modes of preparing the medicaments, and here, of course, the study of pharmacy was apparent. It followed, as a natural consequence, the teaching of how to use and apply those agents, simple and compound, in the treatment of disease. A similar course of instruction was imparted to students of surgery.

Thus to summarize, for the proper study of the more or less rudimentary medical science among the Aztecs, the branches required to be mastered were as follows: medical and surgical pathology, therapeutics, botany, notions of pharmacy, and lastly clinical medicine.

The studies of the pharmacist were more simple; but he was required to possess the most accurate knowledge possible of botany and pharmacy.

Obstetrics remained always in the hands of women who followed this important branch of medical art, especially those females who had already borne children, and had, therefore, some practical experience about a most delicate physiological act.

These, stated in a few words, were the principal branches of the healing art, taught to those who intended to follow the professions of physician, surgeon, or pharmacist. The candidates, however, who had satisfactorily finished their respective studies, were not allowed to go into practice without the corresponding legal authorization.

In Chapter II the subject of Mexican medical mythology is discussed. It is found that the primitive medical superstitions of the ancient Mexicans resemble closely those entertained by the peoples of the Old World, such as the Egyptians, the Greeks, the Romans, and others. Thus the Mayas regarded *Citboluntum* and *Ixchel* as the god and goddess of medicine. Among the Aztecs proper *Tzapollatetan*, considered as the goddess of the healing art in general, was also supposed to have been the discoverer of the resin called *uxitl* or *oxitl* (tar) and many other medicinal drugs. *Xipe*, or *Xipelotec*, was the rancorous god of skin diseases, and after the Spanish Conquest was looked upon as the one that presided over the production of smallpox. The dirty *Nanahuatl* was the god of leprosy and elephantiasis, and *Amimill* was thought to preside over certain diseases of the stomach. *Quetzalcoatl*—the great *Quetzalcoatl*—the god of air, was revered by the Indians as the divinity that taught them agriculture, how to work the metals and precious stones, and who also corrected the compu-

tation of time by reforming the calendar. Under his influence were placed those affections caused by the air, such as coryza, rheumatism, and so on. Sterile women also appealed to him for relief.

Among the Mexicans *Cihuacoatl*, or *Quilaztli*, was considered as the first woman to have borne children, these being always twins; so that the epoch of obstetrics, so to speak, among the nations of the continent of America, may be said to have begun from the time of *Cihuacoatl*. She was afterwards regarded as the goddess of natural labor. *Tzinteuatl*, or *Xochiquetzal*, was the goddess of pregnant women; *Xolotl*, the divinity of twins and monstrosities. After labor, the goddess of water, called by the Aztecs *Chalchiuhcueye* or *Chalchihuitlicue*, by the Tlaxcaltecs *Matlacueye*, by some Indian historians *Xochiquetzalli*, and by others *Macuilxochiquetzalli*, interfered, and on her depended all those diseases supposed to have been caused by water, such as rheumatism, gout, and others. *Ixtlilton*, or *Tlaltecuin*, a black deity, presided over the diseases of children.

There were other minor divinities, but of less importance. Lastly, there was *Centeotl*, the goddess of the earth, likewise called *Toci*, that presided especially over therapeutics and also over the medical profession at large.

Women who died in confinement were supposed to wander through the air afterward, possessing the power of hypnotizing children; and persons who succumbed from anasarca, ulcers, tumors, or allied disorders, were thought to go to an agreeable and cool place for final rest.

The author tells us then how these primitive people, in the midst of superstition and religious fanaticism, would resort to the gods for the relief of their ills, and how the general practice of private and public supplications, offerings and even human sacrifices, was carried in accordance with their beliefs; pointing out a great similarity between the medicine of Eastern Indians and that of Western Indians, that is, between the primitive medical notions of the Old World, as entertained in Persia, Syria, Egypt and Alexandria, and those of the New World, as manifested in the great nations of Anahuac. In both instances the chief foundation of medical theories was *Theosophy*.

Under Chapter III reference is made to the practice of the healing art, proper. Physicians, surgeons, obstetricians and pharmacists, even after graduation, were obliged to register and obtain their respective licenses, before they were allowed to practice on their suffering fellow-men. Practice, then, was regulated by law, and, notwithstanding the prevalence among the Aztecs of superstitious notions, quackery and witchcraft in connection with medicine, were severely punished by a special court or tribunal. Transgressors of the law, in this respect, frequently fell victims to human sacrifice, so common among the ancient Mexicans.

In the same place the subject of epidemics is touched, and from a careful study of the corresponding Aztec hieroglyphics, Mr. Flores shows that in the times of the Toltecs, during the reign of *Meconetzin*, son of *Xochitl*, the fair discoverer of the National beverage, *Pulque*, there was observed the first great epidemic; but no mention is made of the particular disorder to which it was due. In the year of *matlactli tochtli*, which corresponds to 1450 of our chro-

nology, owing to a great snow-storm that devastated the country, another epidemic—this time of pneumonia—took place, the disease being fatal to thousands of people. Still another epidemic of typhus fever occurred in the year 1520, which was also fatal in its results. (Typhus fever or *Tabardillo*, as it is commonly called in modern Mexico, is, at the present time, endemic in the capital of the Republic. It is generally of an unfavorable prognosis, and when it assumes an epidemic character, it is certainly the most fatal of all diseases.) From 1518 to 1520 Anahuac was visited by an epidemic of variola or small-pox, a disease unknown to the inhabitants, having been brought by a negro slave of Narvaez, one of Cortez's men. The scourge, which for the first time appeared on the American continent, is said to have destroyed almost one-half of the indigenous population. The Indians named the disease the *Great Leprosy*, in contradistinction to the *Small Leprosy*, a term applied by them to measles, of which an epidemic appeared soon afterwards.

The Aztecs were not idle in regard to medical studies. They were not stationary. They did not rely wholly on divine interference, but were close observers and applied themselves diligently to study and widen their knowledge. Thus they had their medical societies which provoked reunions, especially at the capital of the empire, and in them the most interesting medical topics were brought forward and discussed. The most renowned intellectual epoch of the Mexicans was during the reign of *Netzahualcoyotl*, of Texcoco, himself an able statesman, a deep thinker, a celebrated bard, and a distinguished and learned philosopher.

DAVID CERNA, M.D., PH.D.

(TO BE CONTINUED.)