

Finding the Present in the Past: Ancient Mexican Medicine

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Not only weapons and bodies crashed against each other when Spaniards landed in Mexico, but also two different cultures. Iron swords, fire weapons, military strategy, war horses and dogs led the natives to surrender. Finally a smallpox epidemic completed the conquest. Smallpox, which was brought in by Spanish soldiers, killed at least one-half of the native population. This infectious disease, a non-fatal viral infection of childhood for Europeans, was a fatal illness for the American natives since their immune system was not prepared to fight this “new” disease.

Ancient Mexicans called themselves Mexicas but Spanish conquerors called them Aztecas (Aztecs) after a tradition which said that originally they came from a mythical land named Aztlan. Even though eventually the Aztecs were conquered by the Europeans, they had advanced themselves in many areas, such as medicine.

After extensive research into ancient Mexican medical practices, I have come to understand the ways they practiced medicine and the reasons for its effectiveness. The Aztec understanding of disease was based on magic, but its practice was based on empiric treatments that had demonstrated their usefulness over the centuries. They saw illness as a punishment from the gods. They believed that each god or group of gods ruled a specific anatomical area, which they could heal or make ill. The connection they made between a divinity and a particular disease or group of diseases was based on avocatory ideas; for instance, the God of rain (Tlaloc) ruled the lungs and the respiratory system because they had noticed that, during the wet season, respiratory diseases were more frequent.

Even though Aztecs had a pathophysiological understanding of diseases different than ours, they were able to develop effective medicine—even more effective than that of their European conquerors.

The cornerstones of the system of medicine were:

- Hygienic principles: Aztecs had understood the importance to health of hygiene. They took daily baths and also shared weekly steam public baths as a medical and social event.
- Health care of mother and child: After every young woman got married, she received help from a midwife who advised her on pregnancy, delivery and child rearing. Breastfeeding was obligatory for the first three years of the child’s life. The objective was to ensure adequate nutrition during their first years of life. The lack of availability of cow’s milk justified this strategy further.
- Medical tradition: Physicians came from families traditionally dedicated to the science of healing; as a result, they accumulated a great collection of medical information and skills. Because they believed that diseases were due to the influence of gods, stars and planets, doctors were trained also in religion and astronomy. They divided their practice into several specialties, such as general practice, surgery, pharmacology, etc.

One of the observations that impressed Spanish soldiers was how Indian physicians treated wounds; they cleaned them carefully and then they covered them with vegetable ointments that led to quick healing. On the contrary Spanish physicians treated wounds with boiling oil and hot iron instruments that delayed wounds healing. Two centuries later, the famous French surgeon Ambroise Paré, eradicated these harsh therapeutic procedures from European Medical Practice.

- **Pharmacology:** Centuries of empiric and family medical tradition had given Mexicans access to at least 300 plants with healing properties. In Tenochtitlan, capital of their empire, they had extensive fields and green houses to culture these kinds of plants. They prepared pills in which the therapeutic substances were mixed with animal fat or vegetable resins. When they prescribed these drugs, they fixed the length of the treatment by moon cycles, that is, they used therapeutic periods of 14 or 28 days. They adjusted the length of treatment to the gender of the patient treating men for longer periods than women.
- **Knowledge of Anatomy:** Aztecs had a great knowledge of anatomy, for instance they had 4000 words—to name the different anatomic structures – more than we have in modern medicine. This knowledge helped them in their surgical interventions. However there is a dark side to this knowledge because some of it derived from the practice of human sacrifices. They believed that they had to sacrifice human beings in order to feed the God of Sun who needed human blood to stay alive. However since Aztecs ate the limbs of their victims, anthropologists believe that the real reason for human sacrifices was to obtain a source of protein, that was difficult to obtain in the desert area they inhabited and they lacked cattle.
- **Medical language:** The nahuatl, the language spoken by the Aztecs, gives us some clues about the way they conceived medicine. For instance, the nahuatl word *pahtli* means drug but also poison; they understood that the same substance could heal and also kill, depending on how it was used. We learn that they divided illnesses into two main categories: bleeding (*ixtli*) and infectious (*temalli*). For instance, the word *extla-ixtli* means hematuria because it is composed by *extla* (kidney) and *ixtli* (bleeding) or the word *extla-temalli* that means pyelonefritis since it is composed of *extla* (kidney) and *temalli* (inflammation). This is not far from the one we currently use in the Western world.

The best compliment to ancient Mexican medicine was made by the leader of the Spanish campaign, Hernán Cortés, who asked king Charles the 5th not to send any more European physicians because the Aztec ones excelled on their own.

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