MEDICINE IN ANCIENT MESOPOTAMIA

Historical Background

The name Mesopotamia (meaning "the land between the rivers") refers to the geographic region which lies near the Tigris and Euphrates Rivers and not to any particular civilization. In fact, over the course of several millennia, many civilizations developed, collapsed, and were replaced in this fertile region. The land of Mesopotamia is made fertile by the irregular and often violent flooding of the Tigris and Euphrates Rivers. While these floods aided agricultural endeavors by adding rich silt to the soil every year, it took a tremendous amount of human labor to successfully irrigate the land and to protect the young plants from the surging flood waters. Given the combination of fertile soil and the need for organized human labor, perhaps it is not surprising that the first civilization developed in Mesopotamia. The origins of civilization can be traced to a group of people living in southern Mesopotamia called the Sumerians. By c.3500 BCE, the Sumerians had developed many of the features that characterized subsequent civilizations. Towns grew to be cities, an early form of pictographic writing was used, metal working had begun, and temples were built on a monumental scale. Generally speaking, however, true civilization is said to have begun around 3100 BCE with the development of cuneiform writing. Cuneiform was a system of writing established by the Sumerians which required the use of a stylus in order to make wedge-shaped marks on wet clay tablets, once the tablets were dry they could by stored, transported, etc. After its development, cuneiform became the dominant system of writing in Mesopotamia for over 2000 years. Even after Sumerian became extinct as a spoken language, many other Near Eastern cultures continued to write using cuneiform. As a result of its extensive use of several centuries, many
cuneiform tablets have survived. These tablets provide historians with the opportunity to glimpse the culture of the ancient Mesopotamian civilizations.

Mesopotamian Medicine: The Sources

Most of the information available to modern scholars comes from cuneiform tablets. There are no useful pictorial representations that have survived in ancient Mesopotamian art, nor has a significant amount of skeletal material yet been analyzed. Unfortunately, while an abundance of cuneiform tablets have survived from ancient Mesopotamia, relatively few are concerned with medical issues. Many of the tablets that do mention medical practices have survived from the library of Asshurbanipal, the last great king of Assyria. The library of Asshurbanipal was housed in the king's palace at Nineveh, and when the palace was burned by invaders, around 20,000 clay tablets were baked (and thereby preserved) by the great fire. In the early 1920's, the 660 medical tablets from the library of Asshurbanipal were published by Cambell Thompson. Other medical texts have been published more recently. For example, Franz Kocher has published a series of volumes called Die Babylonisch-Assyrische Medizin. The first four of these contain 420 tablets found from sites other than Assurbanipal's library, including the library of a medical practitioner (an asipu) from Neo-Assyrian Assur, as well as Middle Assyrian and Middle Babylonian texts. The remaining two volumes of Kocher's work augment Campbell Thompson, providing new joins of broken fragments and much material uncovered in the British Museum. At least one more volume of Nineveh texts has been announced. In addition, the series Spaet Babylonische Texte aus Uruk contains some 30 medical texts not included in Kocher's work. The vast majority of these tablets are prescriptions, but there are a few series of tablets that contained
entries that were directly related to one another, and these have been labeled "treatises." The largest surviving such medical treatise from ancient Mesopotamia is known as "Treatise of Medical Diagnosis and Prognoses." The text of this treatise consists of 40 tablets collected and studied by the French scholar R. Labat. Although the oldest surviving copy of this treatise dates to around 1600 BCE, the information contained in the text is an amalgamation of several centuries of Mesopotamian medical knowledge. The diagnostic treatise is organized in head to toe order with separate subsections covering convulsive disorders, gynecology and pediatrics. It is unfortunate that the antiquated translations available at present to the non-specialist make ancient Mesopotamian medical texts sound like excerpts from a sorceror's handbook. In fact, as recent research is showing, the descriptions of diseases contained in the diagnostic treatise demonstrate a keen ability to observe and are usually astute. Virtually all expected diseases can be found described in parts of the diagnostic treatise, when those parts are fully preserved, as they are for neurology, fevers, worms and flukes, VD and skin lesions. The medical texts are, moreover, essentially rational, and some of the treatments, as for example those designed for excessive bleeding (where all the plants mentioned can be easily identified), are essentially the same as modern treatments for the same condition.

Mesopotamian Concepts of Disease and Healing

Mesopotamian diseases are often blamed on pre-existing spirits: gods, ghosts, etc. However, each spirit was held responsible for only one of what we would call a disease in any one part of the body. So usually "Hand of God X" of the stomach corresponds to what we call a disease of the stomach. A number of diseases simply were identified by names, "bennu" for example. Also, it was recognized that various organs could simply malfunction,
causing illness. Gods could also be blamed at a higher level for causing named diseases or malfunctioning of organs, although in some cases this was a way of saying that symptom X was not independent as usual, but was caused in this case by disease Y. It can also be shown that the plants used in treatment were generally used to treat the symptoms of the disease, and were not the sorts of things generally given for magical purposes to such a spirit. Presumably specific offerings were made to a particular god or ghost when it was considered to be a causative factor, but these offerings are not indicated in the medical texts, and must have been found in other texts.

Mesopotamian Medical Practitioners

By examining the surviving medical tablets it is clear that there were two distinct types of professional medical practitioners in ancient Mesopotamia. The first type of practitioner was the ashipu, in older accounts of Mesopotamian medicine often called a "sorcerer." One of the most important roles of the ashipu was to diagnose the ailment. In the case of internal diseases, this most often meant that the ashipu determined which god or demon was causing the illness. The ashipu also attempted to determine if the disease was the result of some error or sin on the part of the patient. The phrase, "the Hand of..." was used to indicate the divine entity responsible for the ailment in question, who could then be propitiated by the patient. The ashipu could also attempt to cure the patient by means of charms and spells that were designed to entice away or drive out the spirit causing the disease. The ashipu could also refer the patient to a different type of healer called an asu. He was a specialist in herbal remedies, and in older treatments of Mesopotamian medicine was frequently called "physician" because he dealt in what were often classifiable as empirical applications of medication. For example, when treating
wounds the asu generally relied on three fundamental techniques: washing, bandaging, and making plasters. All three of these techniques of the asu appear in the world's oldest known medical document (c. 2100 BCE).

The knowledge of the asu in making plasters is of particular interest. Many of the ancient plasters (a mixture of medicinal ingredients applied to a wound often held on by a bandage) seem to have had some helpful benefits. For instance, some of the more complicated plasters called for the heating of plant resin or animal fat with alkali. This particular mixture when heated yields soap which would have helped to ward off bacterial infection. While the relationship between the ashipu and the asu is not entirely clear, the two kinds of healers seemed to have worked together in order to obtain cures. The wealthiest patients probably sought medical attention from both an ashipu and an asu in order to cure an illness. It seems that the ashipu and the asu often worked in cooperation with each other in order to treat certain ailments. Beyond sharing patients, there seems to have been some overlap between the skills of the two types of healers: an asu might occasionally cast a spell and an ashipu might prescribe drugs. Evidence for this crossing of supposed occupational lines has been found in the library of an ashipu that contained pharmaceutical recipes. Another textual source of evidence concerning the skills of Mesopotamian physicians comes from the Law Code of Hammurabi. This collection was not found written on a tablet, but was discovered on a large block of polished diorite. It was not a code of law in the modern sense, but probably a collection of legal decisions made by Hammurabi (c. 1700 BCE) in the course of his activities as a judge and published to advertise his justice. Several similar collections are known from other areas and periods, and Hammurabi's cannot be taken as representative of all Mesopotamian justice -- in fact, it is outstanding for its application of the principle of an eye for an eye and a tooth for a
tooth, while other "codes" allow monetary penalties. Among Hammurabi's laws were several that pertained to the liability of physicians who performed surgery. These laws state that a doctor was to be held responsible for surgical errors and failures. Since the laws only mention liability in connection with "the use of a knife," it can be assumed that doctors in Hammurabi's kingdom were not liable for any non-surgical mistakes or failed attempts to cure an ailment. It is also interesting to note that according to these laws, both the successful surgeon's compensation and the failed surgeon's liability were determined by the status of his patient. Therefore, if a surgeon operated and saved the life of a person of high status, the patient was to pay ten shekels of silver. If the surgeon saved the life of a slave, he only received two shekels. However, if a person of high status died as a result of surgery, the surgeon risked having his hand cut off. While if a slave died from receiving surgical treatment, the surgeon only had to pay to replace the slave. This use of status to evaluate misdeeds does not seem to appear in other, similar "codes" however.

Regardless of the risks associated with performing surgery, at least four clay tablets have survived that describe a specific surgical procedure. Unfortunately, one of the four tablets is too fragmentary to be deciphered. Of the remaining three, one seems to describe a procedure in which the asu cuts into the chest of the patient in order to drain pus from the pleura. The other two surgical texts belong to the collection of tablets entitled "Prescriptions for Diseases of the Head." One of these texts mentions the knife of the asu scraping the skull of the patient. The final surgical tablet mentions the postoperative care of a surgical wound. This tablet recommends the application of a dressing consisting mainly of sesame oil, which acted as an anti-bacterial agent.

Another important consideration for the study of ancient
Mesopotamian medicine is the identification of the various drugs mentioned in the tablets. Unfortunately, many of these drugs are difficult or impossible to identify with any degree of certainty. Often the asu used metaphorical names for common drugs, such as "lion's fat" (much as we use the terms "tiger lilly" or "baby's breath"). Of the drugs that have been identified, most were plant extracts, resins, or spices. Many of the plants incorporated into the asu medicinal repertoire had antibiotic properties, while several resins and many spices have some antiseptic value, and would mask the smell of a malodorous wound. Beyond these benefits, it is important to keep in mind that both the pharmaceuticals and the actions of the ancient physicians must have carried a strong placebo effect. Patients undoubtedly believed that the doctors were capable of healing them. Therefore, at the very least, visiting the doctor psychologically reinforced the notion of health and wellness.

Other Sources of Health Care

Beyond the role of the ashipu and the asu, there were other means of procuring health care in ancient Mesopotamia. One of these alternative sources was the Temple of Gula. Gula, often envisioned in canine form, was one of the more significant gods of healing. While excavations of temples dedicated to Gula have not revealed signs that patients were housed at the temple while they were treated (as was the case with the later temples of Asclepius in Greece), these temples may have been sites for the diagnosis of illness. In his book Illness and Health Care in the Ancient Near East: the Role of the Temple in Greece, Mesopotamia, and Israel, Hector Avalos states that not only were the temples of Gula sites for the diagnosis of illness (Gula was consulted as to which god was responsible for a given illness), but that these temples were also libraries that held many useful medical texts.
The primary center for health care was the home, as it was when
the ashipu or asu were employed. The majority of health care was
provided at the patient's own house, with the family acting as care
givers in whatever capacity their lay knowledge afforded them.
Outside of the home, other important sites for religious healing
were nearby rivers. The Mesopotamian believed that the rivers
had the power to care away evil substances and forces that were
causing the illness. Sometimes a small hut was set up for the
afflicted person either near the home or the river to aid in the
families centralization of home health care.

Concluding Thoughts

Whether or not ancient Mesopotamian medicine passed on a
legacy that ultimately influenced the doctors of subsequent
civilizations is a question that will never be complete answered.
While many of the basic tenants of medicine, such as bandaging
and the collection of medical texts, began in Mesopotamia, other
cultures may have developed these practices independently. Even
in Mesopotamia itself, many of the ancient techniques became
extinct after surviving for thousands of years. It was Egyptian
medicine that seems to have had the most influence on the later
development of medicine, through the medium of the Greeks.

Some Bibliographical References for Mesopotamian Medicine

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