Biog

a history of medicine in pictures

by George A. Bender
painting by Robert A. Thom

The Code of Hammurabi

THE rich lands between the Euphrates and Tigris rivers, Mesopotamia, now a part of Iraq, frequently have been called "the cradle of civilization." Contemporary with Egypt, there were organized communities in the twin valleys as long as 6,000 years ago, with evidence of the existence of physicians as early as 3000 B.C. When Mesopotamian peoples began to record the happenings of their day on clay tablets or stone, Medicine was a well-recognized profession.

Unlike the case in Egypt, the peoples, languages and governments of Mesopotamia underwent many changes throughout the years during which ancient civilization flourished there. Although various groups such as the Sumerians, Akkadians, Amorites, Assyrians, Elamites, and Chaldeans, paraded across the historico-political stage of this ancient land, the ancient indigenous culture prevailed and absorbed each group of newcomers. In spite of political vagaries, there was basically one Mesopotamian civilization, which is often loosely called Babylonian. Social, religious, and way-of-life patterns varied little, and the practice of the healing arts seems not to have changed considerably throughout the millennia. In ancient Mesopotamia, the basic concepts concerning disease and its treatment were apparently religious.

Seals of Sumerian physicians, at least 5,000 years old, and ancient Sumerian prescriptions are known.

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Also, there is a rather extensive documentation on Mesopotamian medicine written in cuneiform script on clay tablets. However, one of the oldest documents, and one of significance to medicine, is the Code of Hammurabi. This is one of the oldest known law collections, promulgated by the Babylonian King Hammurabi, toward the end of his reign. There is no agreement among authorities as to the time of Hammurabi's reign. Dates as early as 2123 B.C. and as late as 1686 B.C. are given. Therefore, the origin of the Code can be placed only in the general area of 2000 B.C. Obviously it is a codification of much older laws and customs.

This extremely interesting document, preserved on a pillar of black diorite standing now in the Louvre, in Paris, France, deals with all phases of economic and family life in ancient Mesopotamia. Of its 282 paragraphs, 11 refer to the practices of physicians and veterinarians. Several substantially similar translations are available. Excerpts of one by Charles Edwards, of London, paragraphs 215-224, follow:

"If a doctor has treated a Freeman with a metal knife for a severe wound, and has cured the Freeman, or has opened a Freeman's tumor with a metal knife, and cured a Freeman's eye, then he shall receive ten shekels of silver.

"If the son of a plebeian, he shall receive five shekels of silver.

"If a man's slave, the owner of the slave shall give two shekels of silver to the doctor.

"If a doctor has treated a man with a metal knife for a severe wound, and has caused the man to die, or has opened a man's tumor with a metal knife and destroyed the man's eye, his hands shall be cut off.

"If a doctor has treated the slave of a plebeian with a metal knife for a severe wound and caused him to die, he shall render slave for slave.

"If he has opened his tumor with a metal knife and destroyed his eye he shall pay half his price in silver.

"If a doctor has healed a Freeman's broken bone or has restored diseased flesh, the patient shall give the doctor five shekels of silver.

"If he be the son of a plebeian, he shall give three shekels of silver.

"If a man's slave, the owner of the slave shall give two shekels of silver to the doctor.

"If a doctor of oxen or asses has treated either ox or ass for a severe wound, and cured it, the owner of the ox or ass shall give to the doctor one sixth of a shekel of silver as his fee."

Here is rather grim evidence of a regular, recognized medical profession existing 4,000 years ago that attempted at least minor surgery, observed its legal responsibilities, and operated on a government-controlled sliding fee schedule, all based on the social status of the patient. The influence of this Code spread far beyond Babylonia, as is demonstrated in the Old Testament and in ancient Jewish philosophies of "an eye for an eye and a tooth for a tooth." Abraham, originally a citizen of the Mesopotamian city-state of Ur, founded the Hebrew nation at about the same period that Hammurabi ruled Babylon. "Through Judaism, Christianity and Islam ancient Mesopotamian institutions have survived to the present day in the West and in the East," says Sigerist.

Ancient Mesopotamians believed that the air was filled with disease-producing demons who could attack humans when the gods, offended by some sin of the patient, stopped protecting him. Also, sorcerers could mobilize these demons. Hammurabi's code provides ordeal, and even the death penalty, for such acts by sorcerers.

Divination was developed to an extraordinary degree by Mesopotamians. Many techniques were used. Their systems of dream-interpretation still influence the superstitious today. Their stargazing, though done for magical rather than scientific reasons, acquainted them with a number of important astronomical facts. They left amazingly precise clay models of sheep livers, because the livers of sacrificed animals were another source of prophecies and divinations. Priests were trained to be specialists in the observation of this organ.

Divination also was used for the "diagnosis" of disease. That is, practitioners attempted to determine what sin the patient had committed, what god had to be pacified, and what demon had to be driven out. Treatment then consisted primarily of prayers and animal sacrifices to the gods, and of exorcism (the recitation of spells) to drive out the spirits. Often great poetic beauty was achieved in these chants. In addition, drugs and physiotherapeutic measures were employed.

The separation of medicine and priestcraft seems not to have advanced as far in Mesopotamia as it did in Egypt, yet there is evidence of a tendency in this direction. In the famous book on prognosis, "When the incantation priest goes to the house of a sick man..." the observation of symptoms may be found replacing the observation of omens. Case histories set down on the clay tablets of Babylonia are less elaborate, but similar in style and content to those of Egyptian papyri. They consisted of descriptions of symptoms, prognosis, and indications for treatment. Certain pathologic conditions, such as migraine, otitis media, jaundice, pleurisy, and kidney stones, may be

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the picture A Babylonian throne room, around 2000 B.C., is the setting for this painting. Central figure is the physician, defending with dignity his professional practices against the complaints of a dissatisfied, litter-borne patient who seeks invocation of the drastic penalties of the Code of Hammurabi. The King, the scribe with his stylus and tablet of soft clay, court attachés, guards, priests, friends of plaintiff and of defendant, and the usual bystanders comprise the cast of this critical drama of medicine 4,000 years ago.

Acknowledgment of helpful assistance in historical research and preparation of the picture, The Code of Hammurabi, *is extended to Erwin H. Ackerknecht, M.D., Professor and Chairman, Department of the History of Medicine, The University of Wisconsin Medical School; to Dr. Leo Oppenheim, Professor of Assyriology, and his associates of the Oriental Institute, University of Chicago; to Henry E. Sigerist, M.D., and his Volume I,* A History of Medicine; *and to Ralph H. Major, M.D., and his volume of the same title.*

recognized from the texts of the clay tablets.

The armamentarium of the ancient Mesopotamian physician was very rich in drugs—even though the drugs were credited with magical rather than pharmacodynamic values. Hyoscyamus, hellebore, mandrake, opium, hemp, and belladonna as well as mineral and animal substances have been identified as elements of Babylonian prescriptions. Thompson reports having found 250 vegetable substances and 120 minerals in an "Assyrian Herbal" reconstructed from cuneiform tablets found in King Ashurbanipal's library. Even by modern standards, some of the therapy prescribed seems quite rational. For instance, poppy and mandrake were used to relieve pain and to produce sleep; mustard for counter-irritation; elaterium for catharsis; sulfur for scabies; cannabis for neuralgia and mental depression; belladonna as an anodyne, to relieve bladder spasm and dysmenorrhea, and for asthma.

Like that of ancient Egypt, ancient Mesopotamian medicine, especially its drug lore, undoubtedly had a certain influence on early Greek medicine, and thereby, indirectly on modern medical practice. Of incomparably greater medical importance, however, as Ackerknecht points out, was the powerful influence that Babylonia exerted on Judaism, transmitting to it many of its myths, theories, and laws, including the idea of contagion and isolation and the weekly day of rest. It is from Judaism that the world's Western civilization inherited these concepts. Both of these ideas have been of immeasurable importance over the centuries in the prevention of disease.