ASSIGNMENT

Write up on Evolution of Modern Health Care System

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Evolution Of Modern Health Care System

By Piyush Kumar Sahu

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Abstract

A Historical Prospective.

1 Introduction

Primitive humans considered diseases to be "visitations"—the whimsical acts of affronted gods or spirits. As a result, medical practice was the domain of the witch doctor and the medicine man and medicine woman. Yet even as magic became an integral part of the healing process, the cult and the art of these early practitioners were never entirely limited to the supernatural. Using their natural instincts and learning from experience, these individuals developed a primitive science based upon empirical laws. For example, through acquisition and coding of certain reliable practices, the arts of herb doctoring, bone setting, surgery, and midwifery were advanced. Just as primitive humans learned from observation that certain plants and grains were good to eat and could be cultivated, the healers and shamans observed the nature of certain illnesses and then passed on their experiences to other generations. Evidence indicates that the primitive healer took an active, rather than simply intuitive, interest in the curative arts, acting as a surgeon and a user of tools. For instance, skulls with holes made in them by trephiners have been collected in various parts of Europe, Asia, and South America. These holes were cut out of the bone with flint instruments to gain access to the brain. Although one can only speculate the purpose of these early surgical operations, magic and religious beliefs seem to be the most likely reasons. Perhaps this procedure liberated from the skull the malicious demons that were thought to be the cause of extreme pain (as in the case of migraines) or attacks of falling to the ground (as in epilepsy).That this procedure was carried out on living patients, some of whom actually survived, is evident from the rounded edges on the bone surrounding the hole, which indicate that the bone had grown again after the operation. These survivors also achieved a special status of sanctity so that, after their death, pieces of their skull were used as amulets to ward off convulsive attacks. From these beginnings, the practice of medicine has become integral to all human societies and cultures.

2 Egyptian Mythology

The Egyptians, have held Imhotep, the architect of the first pyramid (3000 BC), in great esteem through the centuries, not as a pyramid builder but as a doctor. Imhotep's name signified "he who cometh in peace" because he visited the sick to give them "peaceful sleep." This early physician practiced his art so well that he was deified in the Egyptian culture as the god of healing.

The concepts and practices of Imhotep and the medical cult he fostered were duly recorded on papyri and stored in ancient tombs. One scroll (dated c. 1500 BC), which George Elbers acquired in 1873, contains hundreds of remedies for numerous afflictions ranging from crocodile bites to constipation. A second famous papyrus (dated c. 1700 BC), discovered by Edwin Smith in 1862, is considered to be the most important and complete treatise on surgery of all antiquity. These writings outline proper diagnoses, prognoses, and treatment in a series of surgical cases. These two papyri are certainly among the outstanding writings in medical history.

One of the most celebrated of these "healing" temples was on the island of Cos, the birthplace of Hippocrates, who as a youth became acquainted with the curative arts through his father, also a physician. Hippocrates was not so much an innovative physician as a collector of all the remedies and techniques that existed up to that time. Since he viewed the physician as a scientist instead of a priest,

Hippocrates also injected an essential ingredient into medicine: its scientific spirit. For him, diagnostic observation and clinical treatment began to replace superstition. Instead of blaming disease on the gods, Hippocrates taught that disease was a natural process, one that developed in logical steps, and that symptoms were reactions of the body to disease. The body itself, he emphasized, possessed its own means of recovery, and the function of the physician was to aid these natural forces. Hippocrates treated each patient as an original case to be studied and documented. His shrewd descriptions of diseases are models for physicians even today. Hippocrates and the school of Cos trained many individuals, who then migrated to the corners of the Mediterranean world to practice medicine and spread the philosophies of their preceptor. The work of Hippocrates and the school and tradition that stem from him constitute the first real break from magic and mysticism and the foundation of the rational art of medicine. However, as a practitioner, Hippocrates represented the spirit, not the science, of medicine, embodying the good physician: the friend of the patient and the humane expert.

3 Roman Empire

As the Roman Empire reached its zenith and its influence expanded across half the world, it became heir to the great cultures it absorbed, including their medical advances. Although the Romans themselves did little to advance clinical medicine, they did make outstanding contributions to public health. The construction of sewer systems and aqueducts were truly remarkable Roman accomplishments that provided their empire with the medical and social advantages of sanitary living. Insistence on clean drinking water and unadulterated foods affected the control and prevention of epidemics and, however primitive, made urban existence possible. Unfortunately, without adequate scientific knowledge about diseases, all the preoccupation of the Romans with public health could not avert the periodic medical disasters, particularly the plague, that mercilessly befell its citizens. Initially, the Roman masters looked upon Greek physicians and their art with disfavor.

Ironically, Galen, who is considered the greatest physician in the history of Rome, was himself a Greek. Honored by the emperor for curing his "imperial fever," Galen became the medical celebrity of Rome. He was arrogant and a braggart and, unlike Hippocrates, reported only successful cases. Nevertheless, he was a remarkable physician. For Galen, diagnosis became a fine art; in addition to taking care of his own patients, he responded to requests for medical advice from the far reaches of the empire. With the collapse of the Roman Empire, the Church became the repository of knowledge, particularly of all scholarship that had drifted through the centuries into the Mediterranean. This body of information, including medical knowledge, was literally scattered through the monasteries and dispersed among the many orders of the Church. The teachings of the early Roman Catholic Church and the belief in divine mercy made inquiry into the causes of death unnecessary and even undesirable. Members of the Church regarded curing patients by rational methods as sinful interference with the will of God.

4 European Era

In England, the medical profession found in Henry VIII a forceful and sympathetic patron. He assisted the doctors in their fight against malpractice and supported the establishment of the College of Physicians, the oldest purely medical institution in Europe. When he suppressed the monastery system in the early sixteenth century, church hospitals were taken over by the cities in which they were located. Consequently, a network of private, nonprofit, voluntary hospitals came into being. Doctors and medical students replaced the nursing sisters and monk physicians. Consequently, the professional nursing class became almost nonexistent in these public institutions. Only among the religious orders did "nursing" remain intact, further compounding the poor lot of patients confined within the walls of the public hospitals. These conditions were to continue until Florence Nightingale appeared on the scene years later. Still another dramatic event was to occur. The demands made upon England's hospitals, especially the urban hospitals, became overwhelming as the population of these urban centers continued to expand. It was impossible for the facilities to accommodate the needs of so many. Therefore, during the seventeenth century two of the major urban hospitals in London—St. Bartholomew's and St. Thomas—initiated a policy of admitting and attending to only those patients who could possibly be cured. The incurables were left to meet their destiny in other institutions such

as asylums, prisons, or almshouses.

5 American Society

Humanitarian and democratic movements occupied center stage primarily in France and the American colonies during the eighteenth century. The notion of equal rights finally began, and as urbanization spread, American society concerned itself with the welfare of many of its members. Medical men broadened the scope of their services to include the "unfortunates" of society and helped to ease their suffering by advocating the power of reason and spearheading prison reform, child care, and the hospital movement. Ironically, as the hospital began to take up an active, curative role in medical care in the eighteenth century, the death rate among its patients did not decline but continued to be excessive.

A major advancement in the history of modern medicine came in the mid-nineteenth century with the development of the now well-known Germ Theory. Germ Theory simply states that infectious disease is caused by microorganisms living within the body. A popular example of early Germ Theory demonstration is that of John Snow and the Broad Street pump handle. When Cholera reached epidemic levels in the overcrowded Industrial Era streets of London, local physician John Snow was able to stop the spread of the disease with a street map. Snow plotted the cases of Cholera in the city, and he discovered an epicenter at a local water pump. By removing the handle, and thus access to the infected water supply, Snow illustrated Germ Theory and saved thousands of lives at the same time. French chemist Louis Pasteur is credited with developing the foundations of Germ Theory throughout the mid-nineteenth century.

American hospitals a century ago were rather simple in that their organization required no special provisions for research or technology and demanded only cooking and washing facilities. In addition, since the attending and consulting physicians were normally unsalaried, and the nursing costs were quite modest, the great bulk of the hospital's normal operating expenses were for food, drugs, and utilities. Not until the twentieth century did "modern medicine" come of age in the United States. As we shall see, technology played a significant role in its evolution.

6 Discoveries in the Physical Sciences

1. Electrocardiograph; By - William Einthoven
2. X-ray machine; By - W.K. Roengten
3. Penicillin - 1930's
4. Hematology (Blood Banks) - 1940's
5. Drinker Respirator - 1927
6. Heart-Lung Bypass - 1939
7. Cardiac catheterization and Angiography - 1940's
8. Neurosurgery and Robotic Surgery - in the 1st decade of 21st century
9. Electron Microscope - 1950
10. Body scanners using PET [positron-emission tomography]
11. A spark of innovation in Rehabilitation engineering and Prosthetics fields
12. Computerized tomography scan [CT Scan] and Magnetic resonance imaging [MRI]
13. Spare parts and Artificial organs - after 1954
14. Left Ventricular Assist Devices [LVAT] - for replacement of hearts