Historical Review

The Magic Wands of Medicine

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Abstract

Through the ages, the caduceus symbol and the staff of Aesculapius have been the most widely used emblems representing medicine and the medical profession. It should be noted, however, that while the two logos may be visually quite similar, the historical and mythical origins of the figures differ quite dramatically. Review and analysis of Greek mythology indicates that the Aesculapian symbol is in fact the true emblem of medicine, linking the profession to surgery, pharmacy and hospital care. Similar examination of the caduceus reveals it to be a generic literary symbol closely associated with the concepts of trade, wealth and the practice of alchemy, obtaining its link with medicine through cross-identification and historical happenstance. While presently both symbols are utilized by various medically related organizations, the caduceus seems to be the preferred choice of the more commercially oriented institutions and thus should be avoided in the medical practice.

Introduction

The two most popular emblems used to symbolize medicine are the caduceus and the staff of Aesculapius. When one examines logos of medical schools, international health organizations, nursing and paramedic associations the images of snakes wound around rods are particularly noticeable. What is not immediately apparent, however, is the fact that the medical profession is actually represented by two different symbols, one being the classical and true emblem of medicine and one whose links with medicine are rather dubious and yet whose form has been universally accepted as a medical symbol in popular culture. Because of the similarity of form the caduceus and the Aesculapian staff are often confused and used interchangeably. Nevertheless, the origins of the two symbols are quite different, and thus it is of value to examine the historical events that linked them with the medical profession.

The “Wand” of Aesculapius

The Greek demigod Aesculapius has classically been described as the patron of medicine. Aesculapius was a skilled surgeon and herbalist who was fabled to conquer even death itself. The Aesculapian staff consists of a single snake wound around a knotty branch. Aesculapius is said to have acquired this emblem when he killed a snake that coiled around his staff, but was soon confronted by another snake carrying a magic herb that restored life to its companion. Snakes were thus considered to be servants of Aesculapius, representing vital forces of life as well as wisdom, rejuvenation, longevity and immortality. Although the mythical origin of the Aesculapian staff is universally accepted, the symbol may have had a much more mundane origin. In ancient times parasitic infections involving the worm Dracunculus medinensis or “the fiery serpent” were common. In order to extract the parasite from the patient’s body, doctors would cut the victim’s skin just in front of the worm’s path and as the parasite crawled out they would wind it around a stick a few segments at a time until it was completely removed. It is believed that this parasitic infection was so common that physicians advertised their technique by means of a sign depicting a worm wound around a stick. As a result of this practice, the connection between the symbol and Aesculapius may have been an indirect one. What is clear, however, is the fact that most Greek and Roman physicians were followers of Aesculapius and that his cult was popularized throughout the Mediterranean world, becoming the first medical organization training physicians in the art of surgery and pharmacy.

The Aesculapian staff was consistently used to represent medicine throughout European history except for the Middle Ages when the Catholic church suppressed the use of pagan symbols. Instead, the medical profession was represented by a common medical implement of the times, namely the urine flask or the uroscope. The Reformation is credited with bringing back the image of the Aesculapian staff and since the 17th century it has been used interchangeably with the caduceus. Since Aesculapius was often referred to as the “blameless physician” and holds a prominent place in the Hippocratic oath still recited by modern doctors, it is not surprising that the staff of Aesculapius became identified with the art of healing and is referred to as the true symbol of medicine. Although its symbolic link with medicine and its
The Mythical “Wand” of Hermes

The caduceus or the kerykeion is literally the staff of a messenger, but is classically represented as two serpents entwined around a rod topped with a pair of wings. As such, the caduceus is a well-recognized emblem of the Greco-Roman god Hermes or Mercury. The caduceus itself is not a Greek symbol at all. Its shape and form originated in Babylon, where it symbolized the god Ningizzida who lacked any special connections with the art of healing apart from his ability to exorcize demons, but who held some resemblance to Hermes as the “messenger of mother earth.” The shape and form of the caduceus has also evolved throughout the ages. The Babylonian caduceus, depicted as two successive figure eights with an open end centered around a rod, was transformed in Greece into a single figure eight formed by a pair of snakes coiled around a staff with the wings added much later.

According to myth, Hermes acquired his insignia when he stopped two snakes from fighting by thrusting his walking stick between them. The two serpents wound around it thus forming the caduceus. In classical mythology Hermes is described as the messenger of the gods, a diplomat and a mediator, but also as a patron god of thieves and treachery. He is the self-interested god of trade and wealth and a patron of merchants. Consequently, his symbol seems hardly fitting to represent the medical profession. Hermes is also the god responsible for guiding the souls of the dead to the underworld, a task rather contrary to the goals of modern medicine. Because of this inherent duality of Hermes and his caduceus, the frequent identification of this symbol with the medical profession is rather questionable and thus warrants further discussion.

Caduceus and Medicine

While the link between the Aesculapian staff and medicine is quite direct and acknowledged, the connection between the caduceus and the medical profession has followed a rather tortuous course. Even in ancient Greece the relation between Hermes and medicine was at best tenuous and it is not until the Greeks identified him with the Egyptian god Thot, that a weak connection formed. The Egyptian deity was a skilled healer and a patron of physicians, whose name was invoked to ward off illness. He was also the divine inventor and a scribe of the gods well known for his wisdom and prudence. Thot’s priests dabbled in alchemy and it is thought that through this cross-identification that Hermes and his caduceus initially became linked with medicine. This link was reinforced through another series of historical blunders since Hermes the Greco-Roman god was mistaken with an Egyptian sage and alchemist by the name of Hermes Trismegistus, who himself may have been a priest of Thot. The caduceus was subsequently adopted by the 16th and 17th century alchemists who considered themselves followers of Hermes to whom they mistakenly attributed the invention of their Hermetic arts.

The first references to the caduceus as a medical symbol can be traced to the middle of the 16th century and it has been suggested that since alchemy and medicine were closely linked at that time, the caduceus became inadvertently associated with the medical profession. Through his connection with alchemy Hermes or his Roman equivalent Mercury was considered to possess great wisdom. Since in astrology the planet Mercury was synonymous with wisdom, the caduceus has slowly evolved to represent wisdom as well. As such, the symbol was often featured on family crests and coats of arms but it was by no means restricted to physicians. On the contrary, from the 16th to the 18th century the caduceus was frequently used by merchants, the true followers of Hermes, as well as lawyers and poets who favoured the symbol because of its association with Hermes as the bringer of peace and eloquence.

The reason why the caduceus has become a widely accepted symbol of medicine stems from the prevalent use of this emblem as a printer’s mark. The early printers often saw themselves as followers of Hermes due to their role as messengers spreading the written word. In fact the use of caduceus as a printer’s mark or a colophon to mark the end of a manuscript has been recorded as early as 1516. The use of the symbol by the 19th century British printer John Churchill was instrumental in the popularization of the symbol in the medical community because he primarily published medical works. Churchill’s stylized caduceus was formed from the union of two snakes, each denoting medicine and literature respectively. It is plausible that Churchill’s use of the caduceus was non-deliberate but rather a simple marketing ploy involving a witty embellishment of the Aesculapian staff aimed at showing how medicine and literature were connected. Subsequently the caduceus emblem was mistakenly adopted by other publishers of medical books and thus disseminated amongst members of the medical profession, especially in North America. The misuse of the symbol in the United States was so widespread among the medical community that it even warranted the publication of several articles defending the staff of Aesculapius as a medical emblem. These pleas fell on deaf ears, however, since the caduceus continued to be associated with the medical profession.

The Caduceus in the Modern Era

Perhaps the most important event uniting the caduceus with medicine came in 1902, when the US Army Medical Corps adopted the symbol. This espousal was based in part on an erroneous claim that the symbol was used by the medical corps of France, England and Germany, when in fact these units used the Aesculapian staff instead. The obviously incorrect use of the emblem was later defended as an allegory for peace, and the non-combatant nature of those who wear it,
but in the United States at least it became a common medical symbol and was rarely associated with neutrality.5

Although at present the staff of Aesculapius and the caduceus are often confused and interchanged, it is interesting that an intuitive sense of their meaning and origin somehow persists in our culture. In 1993, Friedlander published a study in which he surveyed 242 medical or health-related organizations in the United States. His research showed that professional organizations tended to use the staff of Aesculapius as their insignia, but commercial organizations were more likely to use the caduceus in their logos.5 Friedlander attributed his observations to the fact that professional organizations follow the classical tradition and endeavour to seek out the true meaning of the medical emblems, while the commercial institutions are attracted by the popular symbol easily recognizable by their target consumers. In light of the fact that the mythological caduceus was sometimes described as being able to turn objects into gold,6 this connection seems appropriate but rather disconcerting. Regardless of the underlying reasons, the continued use of the caduceus as a medical symbol is one of the most enduring mistakes in symbolism and popular culture. In view of its popularity it has been suggested that in the world of modern molecular medicine the caduceus is the more accurate symbol since its symmetric helical form resembles that of a DNA molecule.1,10 However, in light of the historical evidence that traces the use and misuse of this symbol, one cannot deny that the staff of Aesculapius is still the true emblem of medicine.

It is somewhat disappointing that in the age of evidence-based medicine when all the evidence points to the staff of Aesculapius as the hereditary coat of arms passed throughout the ages to all modern physicians, the caduceus still holds a prominent place in medical iconography. Without a doubt, due to its popularity the caduceus has important meaning for many physicians and for some it even serves as a warning and a reminder of the many contradictions inherent in the practice of modern medicine such as the need for a fine balance between the ideals and the business of the profession.2,9 One can only hope that at this point in the torturous history of medical symbols physicians will strive to discard the emblem of the treacherous god of wealth and commerce and instead embrace the ancient symbol of integrity and the healing power of knowledge.

References
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