

Medical Symbols in Practice: Myths vs Reality

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ABSTRACT

Background: The caduceus is the popular symbol of medicine. However, premier health organizations and regulatory bodies such as the World Health Organization and the Medical Council of India use a different symbol- the rod of Asclepius in their logo. There is an increasing awareness and recognition that the caduceus is a false symbol and has no historical substantiation as an emblem of medicine. Many academic and health institutions in the western hemisphere have changed their logo as a consequence. There are other symbols of medicine which are similarly misunderstood.

Objectives: The purpose of the study is to assess the knowledge of common medical symbols among doctors and medical students.

Materials and Methods: Three hundred doctors and medical students were assessed on their knowledge about the Rx symbol, the Red Cross emblem and the true representative emblem of medicine. Logos and emblems of elite medical colleges and medical associations were also studied.

Results: Only 6% of doctors were aware that the Rod of Asclepius is the true symbol of healing. Knowledge of the significance of the Rx symbol and the origin of the Red Cross emblem was 55% and 39 %.

Conclusion: There is very little awareness about the rod of Asclepius and most institutions have adopted a logo based on the caduceus. Awareness of the true origins and the symbolism of the emblems is lacking in the medical fraternity.

Keywords: Caduceus, Medical symbols, Red cross, Rod of asclepius, Rx symbol

INTRODUCTION

The caduceus or the staff of Hermes, depicted as a stick entwined by two snakes and surmounted wings is the symbol of modern medicine in India and elsewhere. Most major hospitals, medical colleges, clinics, professional bodies, prescriptions and medical journals sport this symbol either as an emblem or as part of their logo. The car windshields of many doctors feature this symbol prominently as a badge of prestige and honor. But unfortunately, the very emblem we flaunt as an insignia of our profession is a false symbol and has nothing or very little to do with the noble art of healing. The true and authentic symbol of Medicine is not the Caduceus but the Rod of Asclepius [1]. The Rod of Asclepius is a single serpent entwined rod wielded by the Greek God of healing and Medicine, Asclepius [2]. In Greek mythology Asclepius is the son of Apollo- the god of light, the Sun, truth and also a god of healing. Asclepius's daughters are Hygieia, the goddess of hygiene and cleanliness and Panacea the goddesses of remedies. The Hippocratic Oath which all physicians have taken for centuries is dedicated to the same four deities, namely Apollo, Asclepius, Hygieia and Panacea. In contrast Hermes, also a Greek God and his counterpart in Roman mythology, Mercury are patron Gods of commerce, trade, merchants and a protector of tricksters and thieves. More importantly Hermes is a God of transitions and boundaries, and moves freely between the worlds of the mortal and divine and guides departed souls to the underworld. In 1902 a Captain in the US Army medical corps mistook the caduceus for the Rod of Asclepius and proposed the adoption of the caduceus as the corps official symbol. Several years later, a librarian in the Surgeon General's office noticed the erroneous assumption and alerted his superiors, but since the symbol had been by then in use for several years it was allowed to remain. Unfortunately, others allied to medical services in the U.S. and soon the world adopted the same symbol [3-6]. The staff of Hermes embodies cunning machinations and death, hardly the connotations an emblem of healing should evoke.

Most Prescriptions today are prefixed by the symbol Rx. This symbol is an abbreviation of an old Latin verb 'Recipe' and this

word literally means 'take' ancient prescriptions thus began with a command to take the ingredients of a medication or concoction in a specified manner [7]. The symbol of the International Committee of the Red Cross is a red cross on a white background, this symbol was adopted at the Geneva convention in 1864, this was done mainly to protect medical vehicles and buildings from any military attack during a conflict but this symbol is often mistakenly used to sometimes indicate first aid stations and medical supplies [8]. This symbol was adopted in honor of Henry Dunant, the Swiss humanitarian and businessman who inspired the formation of the international committee of the Red Cross. Since Henry Dunant was a Swiss citizen, an inverse of the Swiss flag which is a white cross on a red background was used as the official emblem. But knowledge and awareness of the history of the symbols associated with our noble profession is lacking or nominal. There is also a great deal of confusion about the legitimacy of certain symbols and their origin. The purpose of this study is to assess the knowledge of medical symbols among doctors and medical students.

OBJECTIVES

To assess the knowledge of medical symbology among the medical fraternity and the adoption of those symbols among medical institutions and specialty associations.

MATERIALS AND METHODS

A single page questionnaire was distributed among 200 doctors and 100 medical students. The awareness and knowledge on 3 symbols-the Rx sign, the Red Cross emblem and the veracity of the genuine symbol; the Caduceus vs the rod of Asclepius was assessed. The doctors group included an equal number 50 of faculty, postgraduates, interns and private practitioners. The faculty and students were from three medical colleges in the city. The emblem/logo of the top 10 medical colleges in India was also studied to ascertain if the confusion regarding the true symbol of healthcare prevailed in the academic 'logo' domain too. The top 10 medical colleges list was based on public perception. Therefore,

Group	Rod of Asclepius	Caduceus
Private Practitioners	1 (2%)	49 (98%)
Faculty	3 (6%)	47 (94%)
Post Graduates	2 (4%)	48 (96%)
Interns	5 (10%)	45 (90%)
Undergraduates	(7%)	93 (93%)
Total	18 (6%)	282 (92%)

[Table/Fig-1]: Impression on the symbol of medicine: caduceus vs rod of asclepius

Group	Correct	Incorrect
Private Practitioners	36 (72%)	14 (28%)
Faculty	38 (76%)	12 (24%)
Post Graduates	29 (58%)	21 (42%)
Interns	27 (54%)	23 (46%)
Undergraduates	34 (34%)	66 (66%)
Total	164 (55%)	136 (45%)

[Table/Fig-2]: Knowledge of the correct meaning of the Rx symbol

Group	Correct	Incorrect
Private Practitioners	18 (36%)	32 (64%)
Faculty	23 (46%)	27 (54%)
Post Graduates	21 (42%)	29 (58%)
Interns	24 (48%)	26 (52%)
Undergraduates	32 (32%)	68 (68%)
Total	118 (39%)	182 (61%)

[Table/Fig-3]: Knowledge of the origin of the Red Cross emblem

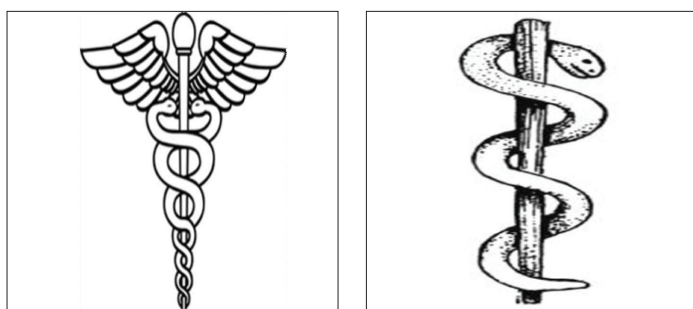
the 2013 India Today magazine list of the top 10 medical colleges [9] was used as the template to choose the college logos. Similarly the logos of corporate hospital chains in India were also observed. The logo/emblem of specialty professional associations was also examined.

OBSERVATIONS

In our study most respondents believed that the true symbol of modern medicine was the caduceus, only a miniscule six percent were aware of the rod of the asclepius and its importance. This is shown in [Table/ Fig-1]. The younger respondents- interns and undergraduates had relatively better awareness about the rod of Asclepius, and this was probably due to them being more internet savvy and being more active in online medical forums.

Knowledge about the Rx symbol was good, while all respondents were aware of the symbol, almost half did not know the true meaning of the symbol. Understandably, knowledge of the symbol was best among private practitioners and faculty, and least among medical students. This is demonstrated in [Table/Fig-2].

Awareness about the Red Cross emblem was also good, but knowledge about the origins of the emblem was less than 50% in



[Table/Fig-4]: Show the Caduceus, a staff entwined by two serpents [10]

[Table/Fig-5]: Depicts the rod of asclepius with a single serpent entwining a rod [11]

all groups. Only 39% overall were aware of its connection to the Swiss flag. This is shown in [Table/Fig-3].

Of the colleges listed in the 'India Today 2013 top 10 medical colleges list', six had emblems/logos based on or a variation of the caduceus, they had two entwined serpents appearing in their emblem/logo [Table/Fig-4]. The six colleges were the All India Institute of Medical Sciences, Christian Medical College Vellore, Armed Forces Medical College, Madras Medical College, Kasturba Medical College and Sri Ramachandra Medical College. Three had unique emblem/logos not featuring a serpent and not based either on the caduceus or the rod of Asclepius, the three colleges were Jawaharlal Institute of Postgraduate Medical & Research, Lady Hardinge Medical College and Grant Medical College, India. Only one college, Maulana Azad Medical College had a single entwined serpent in its emblem based on the rod of Asclepius [Table/ Fig-5]. Postgraduate Institute Chandigarh although not featured in the list because it does not have undergraduate courses, was also one of the few medical colleges which featured the rod of Asclepius in its logo.

Strangely none of the largest corporate hospital chains in the country featured the rod of Asclepius or the caduceus in their logo; this is in contrast to the United States where most commercial and corporate hospitals feature the caduceus prominently in their logo. The Hospital chains whose logos we looked into were the Apollo Group, Fortis, Manipal, Global and Columbia Asia.

Among the specialty associations we looked into, four associations- Association of Physicians of India, Association of Otolaryngologists of India, Indian Society of Anesthesiologists and the Indian Association of Dermatologists, Venereologists and Leprologists had logos similar to the caduceus. Even the Indian Medical Association, the parent body of all doctors features a variant of the caduceus as its logo. The Medical Council of India and the World Health Organization however feature the Rod of Asclepius in their logo.

DISCUSSION

The purpose of the study is not to be little the choice of the caduceus as a medical symbol, but to correct an erroneous assumption and reclaim a part of the rich heritage, mythology and legacy of healthcare. To pay homage to a historical narrative that has been lost under a misconception and to proffer tribute to the true representation and icon of medicine. Numerous hospitals and medical schools in the United States and Europe have changed their emblem or logos after realising the false impression. The authors are not advocating that institutions in India discard a symbol which has enjoyed popular perception and recognition as a symbol of medicine. The intention is to spark a healthy debate and create awareness. There have been a number of articles in recent medical literature that have highlighted the inappropriateness of the caduceus as a symbol of medicine and have sought to restore the rod of Asclepius to its rightful place. The Caduceus is actually the representation of the Greek god of commerce and has been wrongly used all along, in reality the logo of medicine is the staff of Asclepius [12]. The confusion associated with the rod of Asclepius and the Caduceus as medical symbols arose not from just ignorance but from the loss of a deeper significance of these symbols [13]. A vital point favouring the rod of Asclepius is its historic association for millennia with medicine. In contrast the Caduceus became a popular medical symbol only after its adoption by the U.S. Army Medical corps at the beginning of the 20th century, a misunderstanding of ancient mythology and iconography has led to the inappropriate popularisation of the modern caduceus as a medical symbol [2]. The rod of Asclepius has served as a medical emblem since the past 2400 years, the use of the staff of Hermes as a medical symbol is however recent and seems to lack substantial historical background [14]. In our study knowledge

and awareness of the rod of Asclepius and its rightful claim as an emblem of medicine was poor, only 6% of the total surveyed had prior knowledge about the 'correct' symbol. Some of the students and interns attributed their awareness to a recent Dan Brown best seller 'Inferno'. Awareness about the Rx and Red Cross symbol were however high. This matches the findings in similar studies elsewhere. In a study on assessing prescription writing skills in 539 medical students, the symbol Rx was written by 96.1% of students [15]. Similarly the Red Cross symbol is well recognised, especially among the medical fraternity. Semiotics is the study of signs and a study on the red cross emblem revealed that the emblem of the International Committee of the Red Cross was symbolic, indexical and iconic [16]. One of the most important rites of passage a young doctor goes through is the Hippocratic Oath. The staff of Asclepius has represented healing and renewal for millennia and the original Hippocratic Oath is addressed to Asclepius [17,18] Six of the premier medical colleges of our country had two serpents or a close similarity to the caduceus in their logos. The association of the snake to healing and medicine is perplexing but a historical fact; many mythical reasons have been attributed. Greek toxicologists studied the meaning and roots of the snake's usage as a medical symbol and explained that the snake's ability to shed its skin has been associated with the circle of life and the snake's possession of anti-venom against its own poison makes it a metaphorical symbol for medicine [19]. Greek mythology suggests that Hermes came across two fighting snakes and, throwing his wand at them, they became intertwined and stopped fighting [20]. Some have alluded to a less elegant association, although the mythical origin of the Rod of Asclepius is universally accepted, the symbol might have a more mundane origin, and it might have its origin from the method of removal of the parasitic helminthes *Dracunculus medinensis*. To remove the worm, doctors in ancient times would cut open the patient's skin in front of the worm's path and placing a stick in front of it. This helminthic infection was so common then, that doctors advertised their skill by a graphical representation of a worm wound around a stick [21]. Commentators in various countries that have used the caduceus as a medical emblem have argued for a rethink and replacement of the caduceus. An article in a Korean Medical journal argued that the Korean Medical Association's (KMA) symbol is based on the caduceus and the caduceus was adopted as a symbol of the KMA in 1947. The article questions the appropriateness of adopting a symbol of the patron god of travelers, merchants, and thieves as the symbol of a medical association [22]. Many medical schools in the United States have replaced the caduceus with the rod of Asclepius in their logo [23]. Some authors have even advocated replacing the caduceus with more indigenous emblems. An article in an Iranian medical journal argued that the adoption of the caduceus as a medical symbol is misplaced and favoured the use of the 'Simurgh' a benevolent, mythical Persian flying creature as an Asian symbol of medicine [24]. Most of the institutions and specialty associations which have two serpents entwined in their logo have an Indian theme in the background; many have replaced

the staff in the caduceus with a traditional Indian lamp or some other Indian motif. All the institutions which have these logos are premier academic institution or associations and richly deserve their ranking or eminence. It is not the author's contention that institutions which have invested so much goodwill and effort in establishing a well-recognised logo, change them or adopt a new one. The author's only intention is to correct a false presumption and set right the historical context.

CONCLUSION

Awareness about the Rx symbol and the Red Cross emblem is good, but awareness of the rod of Asclepius is poor. Many academic institutions and doctors associations have a logo based on the caduceus. The appropriateness and suitability of any alternate symbols have to be decided by eminent professionals and doyens of the academic arena.

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