

## Medical Concepts in Ferdowsi's Shahnameh

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**S**hahnameh (The Book of Kings) is a long epic poem written by the Persian poet *Hakim Abu 'l-Qasim Ferdowsi Tusi* (940–1020 AD), between c. 977 and 1010 AD. *Shahnameh*, comprising more than 50,000 couplets, is a national epic of Iranians and Farsi speaking people. There are many philosophical, social, ethical and romantic as well as medical concepts in the content of *Shahnameh*. This brief letter presents some examples of medical concepts in Ferdowsi's *Shahnameh* that denotes the antiquity and originality of medicine in Iran.

### Simurgh

Simurgh was a sage magical bird with knowledge of medicine and surgery. Simurgh instructed a priest to anesthetize Rodabeh, cut her flank, extract Rostam, repair the incision and apply dressing. The surgery was uneventful.<sup>1</sup>

Simurgh also helped Rostam to recover from the arrow wounds inflicted during the first battle with Esfandiyar. Simurgh looked inside the wounds and removed four arrow heads from Rostam by its beak. Then, the bird cleared and removed blood from the wounds by its beak. The treatment provided by Simurgh presents the concept of exploring, removing foreign bodies and debridement of battle wounds.

### Alexander and the Indian physician

The Indian king, Kaid made a gift of a wise physician to Alexander. He was able to diagnosis the diseases by inspecting the urine (uroscopy). Alexander questioned the physician about the origin of the ailments. The answer was overeating.

### Borzuyeh Tabib

Among the entourage of Kasra Anushirvan was a prominent physician – Borzuyeh Tabib.<sup>2</sup> He arranged an expedition to India to find a treatment for death. He did not find the panacea, but he was advised by a sage that immortality comes along with knowledge. The sage introduced the book of *Kalileh ve Demneh*. Borzuyeh Tabib brought the book as a gift to Anushirvan.

### Inheritance

Ferdowsi believed that the physical similarities, appearance

and temperament are inherited in the human beings and he emphasized the effects of race, decent and blood on human beings. Ferdowsi indicated that the newborn Sohrab was very similar to his father, grandfather and grand grandfather. The inheritance sign in the Key-Ghobad dynasty was a black mole on their arms. Key-Khosrow and Froud were brothers. They were identified by the presence of a black mole on their arms which was inherited from their father (Siavash), grandfather (Key-Kavus) and grand grandfather (Key-Ghobad).

The birth story of Zal is the most prominent example of Albinism in the Farsi literature. Zal was born with white hairs, eyelashes and silver skin color. He later became a legendary Persian King who ruled over Zabulistan. Now we know that Zal had Albinism and not progeria. The word “*zaly*” (white hair in Farsi) represents Albinism and is rooted in that story. The inferred admonishment of this story is that albinism is not a shame.

Today, we know that the risk of genetic disorders is increased with increased age of mother. In a couplet, Ferdowsi indicated: “an old aged mother gives birth to a vain descendent”.

### Abortion

In Siavash's story, Ferdowsi described an intentional abortion by drug with impure aims.

### Amputation

Amputation was a cause of death in battles. Bahram and Farud lost their upper limbs through their shoulders and died because of their wounds. Amputation was used as a punishment. Khosrow Parviz ordered to cut off the hands and feet of the assassins of his father. Shapur II was titled *Dhū al-aktāf* (“he who pierces the shoulders”) by Arabs because he pierced shoulders and cut them off.

Barbad was a skilled and favorite court musician during the rule of Khosrow Parviz. When he was told about the execution of Khosrow Parviz, he cried, burned his playing instruments and cut off his four fingers so as not to be able to play music for the malevolent.

### Foul mouth odor

Alexander's mother had a foul mouth odor. Darab, the king, was disturbed by that smell and summoned the physicians to treat her. The physicians treated her by rubbing garlic on her palates. Although the patient's mouth burned and she cried, she was cured.<sup>3</sup>

### Vitiligo

In the ancient time, skin discoloration (Vitiligo) was considered

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a sign of leprosy and a demonic disease. Vitiligo was used as an adjective for Saad Vaghas who was the commander of the Arab army during the invasion to Iran. Skin discoloration was also used as a metonymy of hypocrisy. In a couplet, Ferdowsi mentioned that the descendents of Viseh were insincere and double-faced.

### Psychological disorders

Ferdowsi described grief-related depression for two mothers who lost their beloved children. The first example is Rostam's mother. In the aftermath of the death of Rostam, Rodabeh stopped eating because of the grief and mourning for his son. After a week of self-starvation, she lost weight excessively and her eyesight was reduced. The poet has described an eating disorder and anorexia as a symptom of a complicated grief and depression. Consequently, she developed a disorder of perception because she intended to eat a dead snake found in water. The second example is about Talkhand and the invention of chess. Talkhand was surrounded in a battle; however, when the enemy approached Talkhand, he was found dead. Talkhand's death plunged his mother into deep sorrow.<sup>4</sup>

### Literary use of medical terminology

The word "blood" is used as an adjective for some words to increase excitement and affections. The word "blood" is further used in some terms such as the "blood of Siavash. The "blood of Siavash" is a metonymy of an innocent's blood.

Kyphosis has been used as a curse in the context of *Shahnameh*. Hemoptysis (cough that produces blood) is used to intensify the description of affections and excitements.

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