

# Anesthesia in Ancient Persia Down to the 21st Century

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"For some must watch,  
while some must sleep"

Hamlet, Act 11, Sc. ii

This special issue embarks our readers on a journey from the historical perspective of anesthesia, and all the way down to the new trends and giant leaps made in this field of medicine.

The editorial bears testament to the rich history of Persian contributions to the world's body of knowledge and an in-depth understanding of science. Current concepts and innovative insights is a natural continuation of this heritage of furthering knowledge globally.

## Anesthesia in old Persia

In his masterpiece book -the "Shahnameh", Ferdowsi (940 AD-1020) refers to an anesthetic technique comprising of cannabis and camphor for the birth of Rostam by Roudabeh through a cesarean section. Again, brain surgery which entails intense anesthesia has been reported to be performed in the South-East of Iran around the 3rd millenium B.C. (1,2). Inhalational anesthesia has its roots in "Jundishapur university hospital in Khuzestan province where it was practiced for the first time (3).

Evidence points to the fact that the ancient Persian physicians performed neurological and ophthalmic operations around 2800 B.C.E, and that they used cannabis for pain management (4). Again, giants such as Rhazes (865-923 CE), Haly Abbas (949-982 CE), Avicenna (980-1027 CE) and Jorjani (1040-1136 CE) discussed elegantly and at length the different aspects of nerve originated pain (5).

Avicenna (980-1027 CE), also popularly known as the second Aristotle introduced opium as an induction agent for anesthesia and also for facilitation of surgery (4,5). Besides it, Avicenna introduced other narcotics, inebriants and somniferous agents to the realm of medicine and anesthesia.

## A look at our stalwarts in medicine

Iran proudly claims to have had the giants of medicine and surgery such as Avicenna (Figure 1), Zakarya Razi (Figure 2), Hakim Jorjani (Figure 3) who provided innovative thoughts that revolutionized our present day understanding of medicine (6,7,8).

Their elegant teachings were taught for centuries in the European universities and thus they can be safely called as the torch bearers of modern medicine.

## Avicenna's ancestral origin

Avicenna's ancestral origin has always been a subject of controversy and a bone of contention for some. Avicenna who was born in 980 AD in the village of Afsaneh near the city of Bukhara in Central Asia, the Capital of Samanid Kingdom at that time. It was here where he was groomed and served as physician to the then-emperor of Samanid dynasty, Emir Nuh II (9).

Avicenna unfortunately has still been cited as an Arab physician (10) meaning thereby that scholars and researchers have still not reconciled to Avicenna's true ancestral origin. Uzbekistan as depicted in the map was part and parcel of the of the -Samanid dynasty (Figure 4). Although all his books are in Arabic, his ancestral origin has recently been justly claimed of as the son of this soil i.e., Iran (11).

## Medicine as a discipline in Iran

A retrospective look of the past highlights that modern medicine started during the reign of Qajar dynasty when Mirza Taghi Khan-Amir Kabir, the Chancellor of Iran innaugrated Darul-Funun (Figure 5) in the year 1852. It was here that medicine was taught in the beginning as a discipline (12).

## History of modern anesthesia in Iran

The maiden modern Surgery in Iran dates back to 1852 during which the Viennese physician Dr. Jakob Edward Polak anesthetized the patient with ether (12,13). Later those who pioneered the teaching of

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anesthesia for the first time included Dr. Yahya Adl, a French trained surgeon, Dr. Ali Farr, a UK trained anesthetist; Dr. M. Esmaeel Tashayood, a US trained anesthetist; and Dr. A. Mortazawi, again trained in UK. Dr. Tashayood is credited with the teaching of anesthesia as a separate specialty in Iran (13), and introduced the curriculum for medical students in the year 1955. The first center of anesthesia was started in Sina hospital (Figure 6) which was later shifted to Imam Khomeini hospital (formerly known as Pahlavi hospital (Figure 7) (11). It was in 1968 that anesthesia was separated from surgery as a separate and distinct department, and the first board examination based on international standards was conducted in the year 1976 under the supervision of the ministry of higher education (13). It is to be remembered that Dr. Tashayood published two books titled "Selection of anesthetic techniques", and "Pharmacology of anesthetic drugs", which were mostly studied by the residents of anesthesiology for their board examinations. He made tremendous efforts. in writing these text books, one of which became the year book in those times.

Since then, anesthesia has evolved into a huge academia with fellowship training in neuroanesthesia (13), cardiac anesthesia, pain, pediatric anesthesia and intensive care. Complex surgeries are now being performed in far flung areas of the country owing to the presence of highly trained anesthesiologists and fellows.

### The future

The number of trained anesthesiologists in the country was 3327 in the year 2018 catering for patients across the length and breadth of the country (13).

Anesthesia is not the same for all as each patient's unique history allows special considerations and decision-making. So long as the human crave for learning and unveiling the secrets of this specialty-anesthesia exists, anesthesia would flourish and make giant leaps in the years to come. We as the followers of our stalwarts should follow their footsteps, and revive that old charisma and intellectual supremacy that we had centuries back in the entire world in the realms of medicine.



**Figure 1.** Portrait of Avicenna produced with the permission of publisher, Anesthesia and Analgesia, through the courtesy of the Editor-In-Chief, Steven Shaffer



**Figure 2.** Portrait of Zakarya Razi produced with the permission of publisher, Anesthesia and Analgesia, through the courtesy of the Editor-In-Chief, Steven Shaffer



**Figure 3.** Portrait of Hakim Jorjani produced with the permission of publisher, Anesthesia and Analgesia, through the courtesy of the Editor-In-Chief, Steven Shaffer



**Figure 4.** The Samanid Empire at its peak (accessed from wikipedia,Samanid\_Empire) encompassing the entire Uzbekistan-the birth place of Avicenna



**Figure 5.** Darul-Funun



**Figure 6.** Sina hospital



**Figure 7.** Imam Khomeini hospital

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