

History of Contemporary Medicine in Iran

The Oldest Recorded Case of Acromegaly and Gigantism in Iran

Mohsen Najjari PhD¹**Abstract**

Here we commemorate the character and academic authority of Prof. Zabihollah Gorban (1903–2006), the founder of Shiraz medical school. No doubt, in the scope of history of contemporary medicine in Iran, he has been efficient and effective. With respect to this fact, his article on a rare case described in *Acta anatomica* published in 1966, entitled (Observations on a giant skeleton) is browsed and reviewed. A case named Siah Khan with combined acromegaly and gigantism that appears to have letters to say still after nearly half a century.

Keywords: Acromegaly, gigantism, History of Medicine, Iran

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For many years, an interesting and huge skeleton in a glass showcase in the Medical Collage of Shiraz Medical Sciences University catches the sight of medical students of various disciplines (Figure 1). This 259 cm and 245 kg giant usually catches random visitors' sight in this college and astonishes them for minutes. In recent years, with the completion of the new medical college building, this odd structure was moved from the medical college vestibule to a farther place and there are some rumors to return him to the cemetery silent valley. Nevertheless, it seems that the abnormal structure's popularity has not faded, because there are still some people who, having visited the medical college in the distant past, ask the present students and their old friends about that silent odd giant. Siah Khan (1912–1940) was unknown by his people. He was born in a small village about 50 Km from Shiraz, southern Iran.¹ To describe the uniqueness of this huge skeleton, it suffices to say that up to the knowledge of author after so many years, no similar case has been found. He still induces in each new visitor's mind the strange and different feeling of amazement and wonder. Although his brain growth and manners seemed below his age, he surprised all his critics and freely devoted himself to the advancement of science and knowledge at the time of his death – a decision which was hardly expected from this man. With this great decision, he dwelled at the vestibule of the Shiraz Medical College for many years and proudly accepted to be a doorman at elites' home and scientists' ring. If one day an apple falling led to an idea and the law of gravity was found, for many years Siah Khan in a glass showcase has promoted many ideas, and although no new rule was found, many precious lives were saved and many scientists and great discoverers' health was guaranteed by the masters of these ideas.

The strange skeleton with acromegaly and gigantism was introduced to Iran and the global science society 49 years ago in *Acta Anatomica* by the Shiraz Medical College founder, the late Dr. Zabihollah Ghorban (Figure 2).¹

Dr. Zabihollah Ghorban (1903–2006), born in Abadeh, Fars Province, Iran was assigned as the Head of the Shiraz Medical

Auxiliary Training School. He passed his medical training courses in Beirut and France. He was appointed as Associate Professor of Internal Medicine in 1946. In addition, he had been responsible for teaching internal medicine and physiology. He was the first dean of the Faculty of Medicine at the Shiraz University. He has written his memories in an English book entitled "*Medical Education in Shiraz*".² The first electron microscope at the Department of Anatomy in Shiraz Medical School was bought by him from Germany and his colleague Professor Tomasch set it up for performing original research around 1960.³ Undoubtedly, this ambitious venture could be accepted as a highlight among his other worthwhile prominent activities.

Indeed, it must be understood that he was also quite creative in the field of human anatomy at his time. By introducing an expectation, he considerably helped the education and understanding of this science for students of that time. He opened a new door of education through making anatomic comparisons in this case, graded in a way to make students interested and help them learn and understand this difficult and complicated science. Maybe with this idea, future students and scholars will tactfully and carefully look in their environments and society. In the article, he described his observation about an odd skeleton skillfully and eloquently. His attention to tiny anatomic details in those years added to his writing ability and elegant style so that even after so many years, it is still effective, attractive, and impressive for modern readers. The master has gone over the scope of anatomy and has drawn a picture of Siah Khan's conditions in the last years of his life (skin disease and pneumonia). In an article, he points out that his muscular system was not capable of keeping his massive bones (the illness that is nowadays called severe muscle atrophy).⁴ Moreover, he points out that the growth and steroid hormones level, could be an impressive improvement in terms of specialized hormonology for diagnosis. He compared this rare case with similar cases from other countries tangibly,^{6,7} drawing up interesting results, differences like the short longevity of this case compared to his counterparts in other countries and the, hyper sexuality compared to similar cases for which he could not find obvious answers. Undoubtedly, it has given rise to so many questions and ambiguity in the wise researcher and the new medical college founder's mind. Finally, these questions and ambiguities convinced him that instead of burying this rare case in cemetery, he should put him in the medical college vestibule for future scientific judgment. Maybe one

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day this recent slip converts to a fertile tree and the scholars grow from the trees' roots and follow the master's questions and find the answers to the ambiguities. Now that we approach the 50th anniversary of the master's article in the *Acta Anatomica*,¹ with the remarkable advances in new techniques and sciences, it is the proper time to accost to Siah Khan's Case in terms of new clinical and basic sciences again.

From the biological point of view, Siah Khan's Case is verifiable and revisionable in terms of various sciences like orthopedic, ergonomic, rehabilitation equipment, magnetic resonance imaging (MRI), muscle mass revision software, brain, nervous system, and spine. The molecular studies on the remain smears of patient which is obtained from ground tibia bone and its images which exist in the article, are a key that make the case study possible in terms of affection to genetic syndromes.⁵ Did the patient's young age at the time of death pertain to a genetic defect or were there other reasons? The description of this complicated case by the master with dermal problems, pneumonia, vision reduction and epigastria region's pain at the time of death may point to a strange viral disease in those days or a virus which attenuates the immune system,⁸ a hypothesis that needs clarification by virology scholars. In the scope of parasitology, had opportunistic pathogens like cryptosporidium⁹ and toxoplasma¹⁰ caused pneumonia and vision reduction? Did he have kala-azar on his gray face?¹¹ This parasitic disease is still endemic in the Fars Province.¹² Did opportunistic fungi also play a role in the death process?¹³ The mycology scientists will present acceptable answers through molecular techniques. Did the patient suffer from chronic tuberculosis?¹⁴ The answers to these questions will be within the scope of microbiologists. Was the patient in his last years a drug toxicity victim? (After his death it was found that he was an investor in public transportation and he had some droshkies).¹ Will measurements of arsenic level¹⁵ provide an answer to this ambiguity? This question will be answered by pharmacologists. Beyond the master's numerous efforts to present a clear picture of patient's condition with existing properties at those days, his skillfulness, forethoughtfulness and punctuality are obvious, admirable and appreciated, but pathologic evidences and document inattention and no collection and preservation and almost losing all of them are points which admit a poor study. The master with implicit preemption pointed out and confessed to his poor study means as no pathologic reports existed due to the lack of expert pathologists in those days. Undoubtedly, genomic studies and DNA extract techniques on remain smears and his bones are the key to solving some of the questions considered.

At the end, one of the strengths and extremely valuable points of this article is attention to the bioethics dimension as the historical document can be significant and referred. As the Siah Khan's skeleton was preserved after his death according to the late Prof. Ghorban's suggestion and Siah Khan's agreement,¹ it is indicative of the importance of moral standards to the educated master, for which the Shiraz medical college is still pioneer and perfect after nearly 50 years.

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Figure 1. Stand view of Siah Khan's skeleton in showcase at the old building of Shiraz School of Medicine, Shiraz, Iran.



Figure 2. Dr. Zabihollah Ghorban (1903–2006).

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Mount Tochal is at an elevation of 3,933 m, in the Alborz mountain range in northern Tehran, Iran.
(photo by: M. H. Azizi MD, August 2015)