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# Cataract Surgery in Ancient Times

Concerning the article on "Cataract surgery in Albucasis manuscript" pages 75-76 which is published in this issue of Iranian Journal of Ophthalmology (IRJO) a few points took my attention worth mentioning.

The science of ophthalmology and cataract surgery was developed 6,000 years ago, not in Egypt but at Mesopotamian region. The Babylonians mastered this science 2,000 years before the glorification of Greeks.<sup>1</sup> This is well indicated in the monumental documents of Hamurabi (1950 BC)<sup>2</sup> concerning the awards and punishments that a surgeon could obtain from an eye surgery. During the reign of Sassanides dynasty in Iran (220-641 AD) one of the most reputed international universities of the time Jondi-Shapoor (Genta Shapitra) was found in Ahvaz, south of Iran.<sup>3</sup> Many distinguished physicians and ophthalmologists were educated or professed in that university. Just to mention Bakhishou family that for generations (7<sup>th</sup> to 10<sup>th</sup> century AD) were physicians, ophthalmologists in that center and later in Baghdad.<sup>4</sup>

There is no doubt that Al-Zahrawi (936-1013 AD) a Spanish muslim surgeon was a great and competent ophthalmologist of his time, but before him there were many Iranians and Arabs with great fame who improved the surgical techniques and used surgical instruments.<sup>5</sup> I would like to bring up few names:<sup>6</sup>

- **Zakariya Razi (Rhazes or Rasis)** (851-925 AD)<sup>6,7</sup> one of the most famous physicians of Islamic period was born in Ray, Iran. In his famous book "Al-Havi" (Liber continens) and in his second famous book "Al-Mansouri" (dedicated to the governor of Ray) he indicated the surgical techniques of ophthalmology. His books were taught for centuries in the newly found universities of Europe.
- **Abu Maher Sayar**<sup>6</sup> the very famous Persian scientist who lived during the 9<sup>th</sup> and 10<sup>th</sup> century AD, and one of his books concerns the surgical instruments.
- **Ali Ahvazi Erjani** (Holy Abbas) (930-994 AD)<sup>6</sup> was born in Jondi-Shapoor. In his famous book "Maleki" (Le livre Royale et l'Art Medicale), in the second volume he describes the surgical techniques. In his book on ophthalmology "Teb-al-ein" describing the anatomy and physiology of the eye. He worked at Azodi Hospital of Baghdad which was found in 978 AD by Azod-Doleh Deylami. This royal Iranian family reigned in Iran and Baghdad from 932 to 1055 AD.
- **Abolhassan Tabari**<sup>6</sup> (933-976 AD) was an ophthalmologist who was born in Tabarestan, Iran. He wrote "Amraz-al-Ein" a book on ophthalmology. During his life time three very famous ophthalmologists lived in Baghdad.
- **Jebreil-ibn-Abdolah-Bakhtishou**<sup>4</sup> was the ophthalmologist of the court of Deylamian. He wrote the book Teb-al-Ein (ocular medicine).
- **Ali-ibn-Isa** (940-1010 AD)<sup>7</sup> who wrote "Memoradum" book. In his book he talks of hollow needle made in Khurassan, Iran.
- **Ammar-ibn-Ali-Merseli**<sup>7</sup> born in the year 1000 AD at Mursul. He wrote "Experts of Ophthalmology". He operated soft cataracts by aspiration with the hollow needle.
- **Abu-Ali-Sina** (Avicenna) Abu-Ali-Sina (980-1037 AD)<sup>6,8</sup> passing his youth at Gorganj and having deep friendship with many famous figures of the time like Abu-Rayhan-Birouni, Abu-Sahl-Massihi, he choose Abu Mansour-Nuh-al- Ghamari for his teacher of natural sciences and medicine. He was forced to leave Gorganj to go to Ray, Gorgan, and Hamedan. He wrote the very famous book "Canon Medicine" during his travelling years while running away from King Mahmoud Ghaznavi. His books were translated and taught in universities of Europe for centuries. He died at age of 57.

Here we see that the history of ophthalmology and ophthalmic instruments has a very long course of evolution and many contributed to this progress and Zahrawi was just one of them.

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