

CENTRAL ASIAN CONTRIBUTIONS TO THE EARLIER PHASES OF HOSPITAL BUILDING

ACTIVITY IN ISLAM*

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In ancient Egypt and Mesopotamia scientific medicine lived side by side with religious and magical medicine, although with the passage of time scientific medicine made remarkable strides, and the Greeks, in developing their scientific medicine benefited greatly from the knowledge and experiences of Egyptian and Mesopotamian physicians.

The Greeks had the temple of cure which they called asklepion. It was devoted to Apollon and Asklepios, the gods of healing. Cure was brought about by priests in these institutions and psychological treatment occupied a prominent place in them. They were places of miraculous cure, and in them ordinary physicians took no prominent part. Thus, although Greek philosophers were eminently successful in excluding magic from medicine, they could not extend their hegemony to the field of religious medicine, and they could not dominate the procedures of cure exercised in the asklepia, where miraculous cure was supposed to be an almost daily occurrence.

The asklepia were very popular, and people in search of health flocked in large numbers to these places. The psychological effect and mystifying atmosphere of these temples, together with the stories connected with extraordinary examples of previous cures obtained in them, must certainly have played the greatest role as far as the experience of the patients was concerned.

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With the advent of Christianity the temples of cure did not wholly disappear, but pagan gods gradually faded out of the picture. Asklepios was abandoned together with the other gods, and Christ became the true healer. Likewise, the Dioscuri, Castor, and Pollux gave their places to new patrons of the healing art. Many interesting examples of such changes are found. For instance, Benedict of Nursia had the sun-god's temple in Monte Casino destroyed and he built a Benedictine monastery in the same location. Apollo's temple on the Palatine was demolished and out of the same stones, on the same site, was erected the first church consecrated to Sebastian, the Christian martyr and protector against the plague.

It thus seems that the Christian hospitals developed from the old asklepiion shrines. The oracles and the Greek gods were replaced by other patrons of the healing art in conformity with Christian concepts. However, the very strong charitable features of the Christian hospitals are quite noticeable, and they serve as a criterion to differentiate them from the Classical Greek temples and so are probably not the continuation of them.¹

Humanitarian and philanthropic characteristics were very marked in the pre-Islamic hospitals of Byzantium. They had charitable institutions such as the hospices (*xenodochia*), *ptochia* (houses for the needy), *orphanotopia* (orphanages), *gerontocomia* (alms-houses), and the like, and the more specialized Byzantine institution for cure was the *nosocomium*, i. e., the hospital. Such places were usually grouped about a church or a monastery such as was the Basilicad of Caesarea (modern Kayseri) founded by St. Basil toward the end of the fourth century. The treatment and care of the lepers was one specific feature of these hospitals.²

The Byzantine hospitals have been looked upon by some scholars as the direct predecessors of the Islamic ones. Geographical considerations make this contention seem reasonable, seeing especially that hospitals such as that of Jerusalem lay within the territories annexed by the Arabs during the reign of the first four caliphs.³ But

¹ Garrison, *History of Medicine*, p. 176-7; Henry E. Sigerist, *The Great Doctors*, 1933, pp. 21-8; A. Castiglione, *Histoire De La Médecine*, tr. J. Bertrand, Paris 1931.

² C. A. Mercier, *Leper Houses and Medieval Hospitals*, 1915, pp. 3 ff.

³ See, e.g. Brunet and Miélli, *Histoire des Sciences, Antiquité*, pp. 1087-88.

the main point of resemblance between the Byzantine and the Moslem hospitals is found in their charitable nature. In this respect influence from Byzantium may not be considered to be essential however. Moreover, there are contrasting features between the two. For, in contrast to the Islamic hospitals, the priest also seems to have had some role in the Byzantine hospitals in their curing the sick.⁴

Some of the differences between the pre-Islamic hospitals of Byzantium and the Islamic hospitals seem indeed to be very sharp. In Islam there were hospitals in the modern sense of the word, specialized establishments where the sick were treated and discharged at the termination of their treatment. The Byzantine hospitals had not reached this stage of specialization. Its pre-Islamic hospitals were not founded exclusively for the cure of the sick. Moreover, as mentioned before, although medical knowledge had shown great progress in the hands of the Greeks, it had not been able to take the place of religious medicine in its hospitals. It was first in Islam that the divorce of scientific medicine both from magic and religion took place. There were sayings of the Prophet bearing upon medicine and healing, but the medicine that came to predominate both in medical instruction and in the hospital became the scientific medicine inherited from the past and from the Greeks in particular.

The Romans had hospitals set up especially for military purposes,⁵ in addition to the *valetudinaria* of the slaves and the gladiators,⁶ and there were also pre-Islamic hospitals in India. But perhaps the most important pre-Islamic hospital, available as a model for the early Islamic ones, was that of Jundisapur.

The hospital of Jundisapur, in the southwest of Persia, run by Nestorian physicians, was quite certainly the most important hospital which had its origin in pre-Islamic times. Not much truly clear and detailed knowledge is available on this institution, although there are quite a few fragmentary and isolated items of information concerning the instruction in Jundisapur, its physicians, and its hospital. It is not known, e.g., if patients were treated on a charitable basis in the

⁴ Karl Sudhoff, *Archiv für die Geschichte der Medizin*, vol. 21, 1919, pp. 169, 173-174.

⁵ A. Castiglione, French tr., pp. 238-239.

⁶ Brunet and Miéli, *Histoire des Sciences, Antiquité*, Paris 1935, p. 1087.

Jundisapur Hospital, and neither do we know how many beds it contained and whether or not it had separate wards. The only thing we know with certainty is that great doctors were there in the eighth century. It is not known either, strictly speaking, as to the extent to which the hospital at Jundisapur served as a model for the hospitals of Islam.

The most critical study of the subject is still that carried out by B. Ebermann in 1925 in *Zapiski Kollegiy Vostokovedov Pri Aziatskom Muzee Rossiiskoy Akademiy Nauk*. Ebermann forcefully draws attention to the very interesting possibility that certain stories implying early influence of Jundisapur on medical work in Islam may be later fabrications of the Suhu'ûbiyya movement and certain Christian centers. The story that Hârith ibn Kalada, the Arab physician contemporary with the Prophet, studied medicine in Jundisapur and that he had conversations with Anûshîrawân may be the product of later fabrications. For it presents certain chronological difficulties in its details, and it seems that even the story of the invitation of Jurjîs ibn Jibrîl ibn Bukht-Yishû' to cure the Abbasid Al-Mansûr was probably not genuine. Indeed, this story is contradicted by the statements of Ibn al Nadîm and other pre-thirteenth century sources according to whose information Bukht-Yishû' (II), the son of the above mentioned Jurjîs was the first Jundisapur physician to be called to Baghdad. Furthermore there is evidence that medicine in Jundisapur was in the monopoly of certain families, and this suggests that, unlike the Islamic tradition, there was a tendency of professional jealousy among the physicians of Jundisapur. Ebermann has published a summary of this work in *Islamica*.⁷

There was a medical school at Jundisapur which was probably in close association with the hospital there, and there is evidence also of its ties with the Jundisapur school for religious instruction. But systematic influence of Jundisapur on Islamic medicine seems to have started during the reign of Hârûn al-Rashîd, when Jundisapur

⁷ Bericht über die Arabischen Studien in Russland Während Während der Jahre 1921-1927, *Islamica*, vol. 4, 1930, pp. 147-149. A more recent publication may be found in A. Siassi. "L'Université de Gond-i Shâpûr et l'Étendue de son Rayonnement", *Mélanges Henri Massé*, Téhéran 1963, pp. 366-374. See also Aydın Sayılı, "Gondêshâpûr", *Encyclopaedia of Islam*, vol 2, Leiden 1965, pp. 1119-1120.

physicians began to take up their residence in Baghdad. This is strange in view of the fact that Jundisapur was much closer to Baghdad than some other places like Alexandria whose physicians began to contribute to Islamic medicine in much earlier times.

According to Ibn al-Qiftî when Mûsâ al-Hâdî fell ill in 786 doctors such as Abû Quraysh 'Îsâ 'Abdullâh al-Tayfûrî, and Dâwûd ibn Sarâfiyûn gathered together in order to cure him. His condition became worse, however. Thereupon, a certain Rabî' said to Hâdî, "We have been told that a very skilled physician by the name of 'Abd Yishû' (i.e., Bukht Yishû') exists. . . ."⁸ It is of interest that, e.g., the phraseology of this statement indirectly suggests that Jundisapur physicians were not as yet well known in Baghdad during the reign of Hâdî.

Arabic sources contain stories which trace back the medical interest at Jundisapur to a physician who had come from India. These stories imply that this initial Indian influence found a fertile ground for development in Jundisapur and that this medical knowledge was further enriched in time through cumulative experience in treatment and through contact with local medical traditions. It is difficult to determine the factual value of such reports. The transformation of Jundisapur into an important medical center was undoubtedly the work of the Nestorians. But this may not have effectively taken place before the reign of Khusraw I Anûshirawân (531-579). The Nestorian sect was founded in 428, and its adherents were condemned as heretical by the Council of Ephesus in 431, whereupon they migrated to Edessa. Expelled thence in 489 by the Byzantine emperor Zeno, they migrated into Persia. The much quoted statement of Firdawsî saying that the skin of Manî, stuffed with straw, was suspended from one of the city gates and near the wall of the hospital in Jundisapur serves therefore as a misplaced chronological emphasis on the Jundisapur hospital. Indeed, it was in the year 276 that Manî, the founder of the Manichean sect was put to death, and it is doubtful, if not out of the question, that the hospital existed at that time.

The hospital of Jundisapur is important for Islam because it was a foremost Center of Greek medicine and because it was highly

⁸ Qiftî, p. 431. See also, Ibn Abî Uşaybi'a, vol. 1, p. 125.

instrumental in establishing the supremacy of Greek medicine in Islam. Some of its physicians were among the foremost translators of Greek medical works into Arabic, and as its history and development show, the hospital at Jundisapur was a Byzantine appendage, rather than an organic member of Persian culture though it was not a Byzantine type hospital. In fact we know of no other Persian hospitals. However, the word *bîmâristân* was widely adopted for hospital in Islam, by the side of the word *dâr al-shifâ*, and this points to a Persian influence and may confirm a strong influence from Jundisapur.

Maqrîzî refers to a pre-Islamic hospital in Jerusalem,⁹ which was apparently founded in the first quarter of the fifth century.¹⁰ Maqrîzî mentions also a pre-Islamic Egyptian hospital, which was built by the "Coptic" king "Manâqiyûsh, son of Ashmûsa", as the oldest hospital in Egypt. He adds that, according to Abû Sa'id Zâhid al 'Ulamâ(?) (fl.ca.1030) Buqrât (Hippocrates), son of Ayûqlîdus, was the inventor of the hospitals.¹¹ But the Islamic writers were apparently not under the impression that the Islamic hospitals owed their origin to Byzantine ones. Indeed, references to them must be very rare. Jundisapur, on the other hand, is mentioned very frequently. The theory of Byzantine origin is suggested by geographical considerations, and it is supported especially by the fact that the first Islamic hospital, that of Walid in Damascus, included a leper house and had the general features of a hospice as well as a hospital. But these are not the characteristics of the hospitals of Islam in general.

The humanitarian features of the Islamic medieval hospital must not be allowed to eclipse its high medical standing *per se*. The hospital, in the stage of its development reached by the middle of the tenth century at least, was one of the high water marks of the Moslem civilization. The hospitals of medieval Islam were hospitals in the modern sense of the word. In them the best available medical knowledge was put to practice. They were specialized institutions with specialized physicians. They had special wards and organized staffs. Unlike the Byzantine hospitals, they did not have a mixed

⁹ *Khitât*, Bulaq, vol. 2, p. 490.

¹⁰ Sec. Brunet et Miéli, pp. 1087-1088.

¹¹ *Khitât*, vol. 2, p. 405.

function of which the treatment of the sick was only one part. They were prototypes of the modern hospital.

According to the testimony of the Islamic writers the first hospital built in Islam was in Damascus. The founder was Walid ibn 'Abdulmalik (705-715), the sixth *Umayyad* caliph. According to Maqrizi the date of its construction was the year 88 after the Hijra, i.e., 706-707 A.D. This first Islamic hospital had been created for the purpose of curing the sick and giving care to those afflicted with chronic diseases, and for looking after lepers, the blind, and the poor. There was more than one physician employed in this hospital.¹²

As here lepers were isolated and looked after and as in it care was given to the invalid and the poor, this hospital is seen to resemble partly at least Byzantine *nosocomia*. These features, as said before, were not the characteristics of or typical for the medieval Islamic hospital as it emerged some time later. However, as they are found in this first Islamic hospital we may infer that this, so far as is known, earliest hospital of the World of Islam may owe its existence to Byzantine influence, at least partly.

The lepers were isolated in the Walid Hospital in order to prevent the contamination of other patients. This segregation of lepers, of which all sources referring to this hospital speak, reminds one of the admonitions of Muhammad against mingling with sufferers from contagious skin disease. Moreover, the fact that the Prophet frowned upon treatment of the sick by unauthorized persons may account for the tendency which already seems to be discernible in this first Islamic hospital's staff with several physicians toward specialization on the cure of the sick.¹³ Therefore, as a second possibility we may decide that the Prophets' pronouncements concerning medicine and concerning contagion, more specifically, may have played a part in the creation of this Walid Hospital. Indeed, the Prophetic *Traditions* were usually in the form of useful advice and far from being unscientific. They were generally empirical in nature and at times admo-

¹² Ahmad Issa Bey, *Histoire des Bimaristans à l'Époque Islamique*, Cairo 1929, p. 127.

¹³ See Aydm Sayılı, "The Emergence of the Prototype of the Modern Hospital in Medieval Islam", *Belleleten*, vol. 44, 1980, p. 281.

nished that people not experienced in medicine should not practice the art.¹⁴

We have no information concerning the physicians who worked in the Walid Hospital or who gave it shape and acted as the guiding spirit in its foundation. Barmak, the head of the Buddhist temple Nawbihar of Balkh was skilled in medicine and was also learned in astronomy and philosophy. In 705 he was summoned to Damascus, the court of Abdulmalik, to cure Maslama, the son of that caliph. For he had been successful in curing at least one of the commanders or highly placed personalities who were involved in the activity of the Arabs of annexing the districts of Khurasan and Transoxania to the Islamic realm and spreading the Muslim faith beyond Persia. We do not know how long Barmak stayed in Damascus, but he had returned to Balkh by 725-726. For it was then that he presided the rebuilding and construction works carried out in Balkh which had previously suffered from warfare involved in its conquest.¹⁵ All this shows that there was much confidence in Barmak's skill as a physician, and apparently 'Abdulmalik and his son Maslama were not disappointed in their reliance on him. For we know that Maslama was still alive in 720-721. We know that Barmak's medical knowledge was that of India. So, as a third possibility, we may conclude that the foundation of the first Islamic hospital, that of Walid in Damascus in 706 or 707 may be, at least partly, due to an influence originating from Central Asia and introducing Indian medicine into newly emerging trends and traditions of Islam and into its nascent institution for the medical care of the sick.

That in the creation of the Walid hospital an influence of Indian medicine through Central Asia in the person of Barmak, the head of the Nawbihar of Balkh, may have been involved is a reasonable conjecture. For, as we shall presently see, this Barmak's son Khâlid or his grandson Yaḥyâ was a patron of Indian medicine and active in the foundation of another hospital run by physicians representing that medicine. And, moreover, Indian medicine was apparently of such a nature that it could have been effective in the emergence of a hospital similar to that founded by Walid in Damascus.

¹⁴ See, Aydın Sayılı, *ibid.*

¹⁵ Barthold, "Barmak", *Encyclopaedia of Islam.*

Asoka (263-226 B.C.) is said to have caused the construction of hospitals in India, and Hindu hospitals have been dated further back also. R.F.G. Müller has shown that the description of those institutions as "hospitals" is based upon rather insufficient evidence.¹⁶ But it is quite certain that there were hospitals, or at least dispensaries in India in post-Christian pre-Islamic times. Müller is reluctant to accept this, but his requirements are too rigid. His criticisms would apply to the pre-Islamic Byzantine hospitals also, the existence of which he seems to accept. On the basis of his requirements it would not be justifiable to say that a hospital existed in Jundisapur either. The Indian institutions were similar to the ones in Byzantium; they were more like hospices, and medical help was only one of the diverse types of charity available in them. And, as we have seen, the Walid Hospital too shared such features.

What happened in Damascus in the way of medical trends is not known with certainty. Alexandria seems to have contributed much to the development of medical instruction in early Islam. Mention is made of 'Abdulḥamīd ibn Abjar, who lived during the time of the Umayyad caliphs 'Abdulmalīk (685-705) and 'Umar Ibn 'Abdul'azīz (717-720). Ibn Abjar is described as the "head of instruction" in Alexandria where pre-Islamic activity seems to have been continued. Already before he became caliph, 'Umar ibn 'Abdul'azīz was a friend of Ibn Abjar, whom he converted to Islam. After he became caliph he made Ibn Abjar his personal physician, and this resulted in, the transfer of the medical teaching from Alexandria to Antioch and Harran¹⁷ and to the Umayyad capital at the time Barmak was apparently out of Damascus, as we have seen above.¹⁸

Max Meyerhof draws our attention to a chronological difficulty in the account given by Ibn abī Uṣaybi'a, who seems to say that Ibn Abjar taught in Alexandria before the Moslem conquest of that city (641 A.D.). Ibn Abjar would thus have to be over one hundred years old at the time when 'Umar ibn 'Abdul'azīz came to power. Other sources also speak of 'Umar's *patronage* of Alexandrian medicine,

¹⁶ R. F. G. Müller, "Über Krankenhäuser aus Indiens Älteren Zeiten", *Archiv für die Geschichte der Medizin*, vol. 23, 1930, pp. 135-151.

¹⁷ Ibn Abī Uṣaybi'a, vol. 1, p. 116.

¹⁸ See above, p. 8 and note 15.

however, and Ibn Abi Uşaybi'a speaks very briefly and only passingly of the beginnings of Ibn Abjar's teaching career. He dwells mainly on that scholar's relationship with 'Umar ibn 'Abdul'azîz, and we may therefore consider reliable this part of his information.¹⁹ I have inserted these specific items of information here. For though they do not throw any specific light directly on our particular problem, it is of interest that in no way they contradict our three conjectures or run counter to them. And in no way do they corroborate them, since Ibn Abjar and the Alexandrian medical teaching tradition must have nothing to do with the tradition of building *nosocomia*.

The construction of one other hospital in Umayyad times is reported; this was in Cairo. Our only source concerning its existence is in Ibn Duqmaq (d. 1406), and it contains no specific information concerning the nature and characteristic traits of this hospital. Its location, however, is given in some detail.²⁰

According to information available, the next two hospitals were built in early Abbasid times. These are the Barmakid hospital which was undoubtedly in Baghdad, though its location is not specified, and the hospital built by Hârûn al-Rashîd in Baghdad. This latter hospital, having been founded by Hârûn al-Rashîd in the period when he was caliph, must have been built sometime between 786 and 809, i.e., during that monarch's reign. On the other hand, as a result of translations Greek medicine became predominant and Indian medicine gradually went into the background. Of the two hospitals just mentioned the Barmakid Hospital is therefore the third and the Hârûn al-Rashîd Hospital the fourth Islamic hospital concerning which sources contain fragmentary report.

It is true that the Barmak family remained in power until they were ousted in 803 by Hârûn al-Rashîd. If therefore their hospital was built after 786, it could be later than Al-Rashîd's Hospital. However, the date of construction of the Barmakid Hospital was undoubtedly before Al-Rashîd sat on the throne. For its head-physician was a contemporary of Khâlîd ibn Barmak (d. 781-782) by

¹⁹ Max Meyerhof, "La Fin de l'École d'Alexandrie d'Après Quelques Auteurs Arabes", *Archeion*, vol. 15, 1933, pp. 10-12.

²⁰ See, A. Issa Bey, p. 111.

whom he was patronized. This was therefore during the reign of the caliph Maḥdī (775-785) or perhaps even earlier.

Our knowledge of the Barmakid Hospital is derived from Ibn al-Nadīm. He tells us that Ibn Dahn (or Dahani) al-Hindī, i.e., Ibn Dahn the Indian, was the director of this institution and that Khâlid ibn Barmak ordered him to translate the Indian medical work of a physician called Ṣusruta (*Ssrd*). Mankah al-Hindī who came to Baghdad during the caliph Al-Manṣûr's reign (754-775) too was apparently connected with this hospital. For Ibn al-Nadīm says that Yaḥyâ ibn Khâlid ibn Barmak ordered Mankah" (who was in the Hospital", to write a commentary on Ṣusruta.²¹ This statement of Ibn al-Nadīm may be interpreted to possibly indicate that the Barmakid(?) Hospital was still functioning during the later parts of the reign of Hârûn al-Rashîd. It is of interest that when Hârûn al-Rashîd fell ill in 793-794, he asked Yaḥyâ ibn Khâlid to recommend a doctor to him. Yaḥyâ mentioned Bukth Yishû' (II) and, in order to make his recommendation more convincing, added that he had previously been invited to cure Al-Hâdî (785-86).²² This means that the date of foundation of the Hârûn al-Rashîd Hospital was somewhat later than 794 A.D.

Very little information is available concerning the Baghdad Hospital or Hârûn al-Rashîd. But it is of great interest to hear that in the decision of founding this hospital which was a hospital symbolizing the supremacy and predominance of Greek medicine in Islam a member of the Barmak family seems to have played a part. But of greater importance is that in the foundation of the third hospital not only Central Asian initiative came into play, but that it was based on Indian medicine which apparently constituted again a Central Asian contribution.

The hospital which was fifth in date of construction was that of Faṭḥ ibn Khâqân and was located in Cairo. Faṭḥ ibn Khâqân was a Turkish general and the minister and close associate of the caliph Mutawakkil. He was also a booklover and a founder of library. Faṭḥ ibn Khâqân died in 861. Unfortunately we have no specific information about this hospital.²³

²¹ *Kitâb al-Fihrist al-'Ulûm*, ed. Flügel, 1871-72, vol. 1, pp. 245, 303.

²² Ibn Abî Uṣaybi'a, vol. 1, p. 126.

²³ Magrizi, *Khitaṭ*, Bulaq, 1854, vol. 2, p. 406.

The sixth Islamic hospital was founded by the Turkish statesman Aḥmad ibn Tulun in 872 or 874 in Cairo. Aḥmad ibn Tulun was the founder of the Tulunid dynasty (868-905) and the son in law of the above mentioned Faṭḥ, ibn Khâqân. Ibn Tulun, has to his credit also other important construction works in Egypt, such as the Great Tulunid Mosque, the Aqueduct, and the Nilometer. The Tulunid Hospital is among the outstanding hospitals of Islam in spite of its early date. It was first surpassed by the Adudi Hospital of Baghdad which was founded in the year 981 or somewhere around that date. So, here we have again a Central Asian contribution to the hospital building activity of Islam.

The Tulunid Hospital contained two bathhouses one for women and one for men. All treatment and medicine were free of charge in it. Patients entering this institution had to remove their street clothes and deposit them, as well as their valuables, for safe-keeping to the hospital management. They were then given the special clothes worn by the patients and assigned to their beds. They received food and medicine gratis until completely cured. The Tulunid Hospital had a section for the insane, the first known of its kind. The Hospital had also a library. Unfortunately our knowledge of the physicians who worked in the hospital is very limited.

So far as is known, the Tulunid Hospital is the first Islamic hospital which had *waqf* revenues. The endowment of the hospital with *waqf* constituted a sign of a more complete integration with the Moslem culture and civilization, and it was also a guarantee of the hospitals longevity.

Ahmad ibn Tulun also set up a dispensary next to his Tulunid Mosque in Cairo which was built before the Hospital.²⁴ This was a pharmacy where a physician was at hand every Friday. Apparently, the purpose for establishing this dispensary was primarily to extend medical help in a manner similar to an emergency of first aid station. India seems to be the only place rich with precedents for such kinds of medical posts. Such medical aid stations are said to have existed in each of the four gates of a certain Indian city, e.g. Indeed, many of the simpler and more primitive hospitals claimed for India in

²⁴ *Khiṭāṭ*, vol. 2, p. 405.

pre-Islamic times were probably nothing more than such medical depots, or store houses, where physicians were also available.²⁵

I have not come accross other examples of this nature in medieval Islam. Thus, though the medical aid station of Ibn Tulun does not seem to have served to establish a tradition in Islam, it serves to corroborate the existence of influences from Indian medicine upon the early hospitals of Islam, and it also shows that there were Central Asian, and, more specifically, Turkish contributions to the early hospital building activities of the Islamic World.

²⁵ R. E. G. Müller, "Über Krankenhäuser aus Indiens Älteren Zeiten", *Archiv für Geschichte der Medizin*, vol. 23, 1930, pp. 135-151.

