

Dr. O'Shaughnessy in India

It was William Brooke O'Shaughnessy, MD, sent to Bengal by the British East India Company in the 1830s, who informed European physicians about the medical potential of Cannabis (which he referred to as "Indian Hemp").

O'Shaughnessy could not have made his contribution to Western Medicine if he'd been a racist or a snob. He regarded his Indian colleagues and students with the utmost respect, as confirmed by this excerpt from *History of Medical Science: Influence of Western Education in 19th Century Bengal* by Binaybhusan Ray, published 2005, Sahityalok. Translated from Bengali to English by Tapoja Chaudhuri, PhD, with assistance by Sunil Aggarwal, MD, PhD.

In India O'Shaughnessy advised the medical establishment to train teachers, to teach in the mother tongue, and to study and make use of indigenous (and affordable) herbal medicines.

In 1809 in the town of Limerick in Ireland, Valiyal O'Shaughnessy's son William O'Shaughnessy was born. During his childhood his nickname was Boswell. He was sent to Edinburgh for his medical education. From there he received his M.D. degree in 1830.

O'Shaughnessy joined the East India Company as an assistant surgeon. He came to Bengal in 1832.

During this time, the government commissioned a committee to teach Western medical science to students who had been training in native medical institutes. O'Shaughnessy had come through France en route to Bengal and he was inspired by the education provided by the Normal schools. In those institutions, teachers were given training in all general subjects. O'Shaughnessy recommended this approach [med school classes to be taught in the mother tongue while students learned English] to compensate for the lack of medical education in British India.

He presented a formal letter to Lord William Bentinck through Major Teller expressing his opinions. Without mentioning his own personal opinions, Lord Bentinck sent O'Shaughnessy's document to this newly commissioned committee. The main statements of this document were:

- The establishment of an English medical science college in Calcutta with five professors and fifty scholarships. The same kind of practical training should be given there as that given in the schools in Great Britain. Its main purpose would be to educate madhyamik [Class 10] level teachers.
- In the next stage, the establishment of a madhyamik-level class for three years. Their education will be conducted in their mother tongue. Students educated in the English medical college will teach there. The curriculum would be based on France's educational institutions.

The Committee did not heed O'Shaughnessy's recommendations (except the establishment of an English medical college). One institute was established in a misdirected fashion and the half-educated students from there practiced only in Calcutta. However, at that time, there were more than enough European doctors practicing in Calcutta.

In 1836 O'Shaughnessy established a program with the English class students. Each day a student would give a lecture. The goal was to produce teachers for the future. But this plan had to be stopped due to the limited knowledge of these students.

In November 1839 the government was compelled to open a medical science class in Urdu. Shivchandra Karmakar was the chemistry and botany professor. Nabakrishna Gupta was the professor of anatomy and similar topics...

The college council established an exam

in 1841 and after six days of exam, 11 students were considered to be capable.

O'Shaughnessy was acknowledged by a letter in *Friend of India* magazine. It said: "The whole country is grateful to Dr. O'Shaughnessy for his successful plan of a medical science school. The main purpose of this institution is to remove quack doctors by creating a group of doctors educated in medical science and surgery through the medium of the mother tongue and they will be good for the nation.

"The government is completely aware of the necessity of schools in mother tongue and will definitely keep an eye towards its progress... The anti-mother tongue tendency of the education council is gradually diminishing and it would not be surprising if within the next two or three years a plan for educating through mother tongue is adopted. In any case, in the current context, even if the education council is not expanding this, it won't hold an aversion towards the essential medical science school in mother tongue."

Using Indigenous Medicines

O'Shaughnessy took a medical position under Lord Metcalfe in 1833. Later, after a Medical College was established in Bengal, he joined it in the position of a teacher.

In 1838 the government formed a committee to assess the status of the [East India] Company's dispensary and to explore the possibilities of using indigenous medicines. Involved were Dr. W. Jackson, Dr. J. Rankin, Mr. Bramley, Dr. Pearson, Mr. James Princep, and O'Shaughnessy. Before their work was over, however, the committee stopped functioning due to the death of some members, personal ill health of many others, and some other unpredictable circumstances.

At that point O'Shaughnessy was given the sole responsibility for the project. He based his report on the following factors:

- The use of pharmacopeia and thoughts about Nature.
 - Discussion of pharmacopeia published in Europe and America.
 - Discussion about the necessity of publishing a pharmacopeia in Bengal and its potential benefits.
 - Description of procedures for investigation [for working on a new pharmacopeia] and its dissemination.
- O'Shaughnessy presented five reasons for publishing a separate pharmacopeia for Bengal:
- Most of the plants and shrubs described in the British pharmacopeia are not found in India. Hence, it is necessary to investigate indigenous plants and shrubs in their stead.
 - Many indigenous plants and shrubs found in India can cure numerous diseases. There is no mention of these plants in the British pharmacopeia.
 - Based on factors like cost of labor and special restrictions on taxable imported goods, the rules about medicines have been revised in the British pharmacopeia. However, since these restrictions are not applicable to India, there is no benefit from such discussions.
 - In many cases there is a necessity for a complete discussion of chemical production processes.
 - There is a dire necessity to change the language of the British pharmacopeia to better suit the standard of education of the people in this country and its environment.

O'Shaughnessy emphasized the necessity of certain steps in producing the pharmacopeia:

- Define scientific terminology.
- Provide brief and clear instructions for distillation, sublimation etc. in terms of producing medicines.
- Alphabetically arrange medicines produced from plants and provide the follow-

ing scientific criteria for each: history, botanical illustration, places to acquire them, market price, method of use, and proportions for preparation.

- Alphabetically arrange pictures of chemically produced alkaline, mud, and metallic materials in stone-carved vessels and discuss their prices, natures, and uses in medicine.

- Mention the formulas of making medicinal pills, alcoholic preparations, and their extractions and procedures to make them in bulk as well as their prices

- Discuss medicinal liquid material contents with regards to weight and volume and using both English and Indian measurement units.

A day will come when these people can open shops in many places and can compete with government medicinal shops.

- Include clear enough instructions for indigenous medicine producers in the pharmacopoeia. For those youths who can speak in English, Hindi, and Bengali, it is essential to pay attention to providing them education so that they can gain these skills with little effort and expense. As a result of this, a day will come when these people can open shops in many places and can compete with government medicinal shops.

A Second Volume

Just a few days after the first issue was published, O'Shaughnessy brought out another volume to compensate for the fact that in Bengal some necessary medicines must be imported from Europe. This volume discussed medicines that indigenous doctors have been familiar with for a long time. But till this day, in all the pharmacopoeias that have been published, there haven't been any mention of these medicines.

The second volume discussed how to substitute indigenous medicines when imports from Europe were unavailable.

O'Shaughnessy published a book about chemistry in 1837. Discussing its purpose, in the preface he said it had been published for medical students and medical assistants. Compared to the expensive European textbooks, this book would be accessible.

As a teacher working in the medical college, he was familiar with the students' range of understanding. Those enlightened by Western education were very familiar with the main topics in the physical sciences. His book was aimed at those with no previous understanding of the elements.

There is a dearth of modern instruments and laboratories in Bengal. Those who must depend on materials available in the market to conduct experiments are not helped by texts that refer to expensive European instruments. O'Shaughnessy wrote his chemistry book for those conducting experiments with cheaply produced instruments.

At the end he discussed several matters based on his personal experiences as a chemist. Included was an account of how to investigate murder by poison (a noted incident in this country), and how to treat kidney stones.



LINE DRAWING OF O'SHAUGHNESSY AND DR. GOPAL CHANDRA ROY from the *History of Medical Science: Influence of Western Education in 19th Century Bengal*. Roy, who attended Calcutta Medical College, published a paper 'On the solvent action of Papaya juice on the nitrogenous articles of food' in the *Glasgow Medical Journal* (1874) — thought to be the first article by a native Indian in a foreign journal.

Investigating and using native plants would not only benefit the poor, O'Shaughnessy wrote, but would create a corps of applied chemists.

Chemists make quinine from a type of bark from Peru. In this country, to treat fever, rulers import that bark, quinine, and other medicines from Europe and America. It was difficult for the indigenous poor to buy those expensive medicines. However, in Indian jungles, there are many similar botanicals. One of them is miasmata.

Investigating and using native plants would not only benefit the poor, O'Shaughnessy wrote, but would create a corps of applied chemists. Instead of relying on other countries to provide necessary medicines, India would be independent.

O'Shaughnessy also discussed opium and its adulterants. He had previously written an article in *The Lancet* magazine about adulterants found in sugar.

O'Shaughnessy published an article about India's herbals in *Medical and Physical Society Transactions* (Calcutta, 1842), noting that from 1835-1838, the government spent 6,511 pounds importing 12 medicines for druggists in Calcutta, Bombay, and Madras. Another 188 medicines, cost only 3,000 pounds.

In India there are many herbals that indigenous doctors always — and European doctors on special occasions — use. As an example, he mentioned surgeon doctor

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THE PROVINCIAL MEDICAL JOURNAL was published in London and widely read by British and other European physicians. W.B. O'Shaughnessy's paper "On the preparations of the Indian Hemp, Or Gunjah (*Cannabis Indica*)" was dated February 4, 1843.

O'Shaughnessy from previous page

Sharif in Dum-Dum [near Calcutta]. Dr. Sharif healed 13 Europeans through the use of some narcotic-type medicine. It was much less toxic than quinine.

Similarly, a surgeon named Dicken in Balasore treated three Europeans and didn't notice any negative reactions. In the cases where a lot of people hesitate to use Quinine, this can be used safely.

Many members of the Society use rusot for eye inflammations. This medicine is found in all markets. It is extracted from the bark and trunk of a tree called Barberry. It is equivalent to Osisa written about by Greek and Arab authors. O'Shaughnessy used berberine for patients afflicted with fever. For patients afflicted with gonorrhoea he used aloe, which is found everywhere in India.

He mentioned a narcotic-type medicine produced from the weed Nux Vomica. This plant is found in abundance in Sylhet. Its local name is 'kuchilaka malong.' Its use in patients afflicted with rheumatism and

A well-known person named Amir made majoon in front of O'Shaughnessy quite a few times.

paralysis is particularly noteworthy. In Cuttuck, its price is one mon per rupee.

On Indian Hemp

O'Shaughnessy wrote an article about the use of Indian ganja. It described the use of bhang in:

- Treatment of patients inflicted with rheumatism with the use of bhang.
- Treatment of patients inflicted with hydrophobia [rabies]
- Treatment of cholera
- Treatment of tetanus
- A case of deformed limbs

O'Shaughnessy acknowledged those who supplied him with facts about ganja — Said Kerat Ali Mutali of Hooghly's Imambara and Hakim Mirza Abdul Rajes of Tehran, foremost. According to them, during this time ganja was used in contemporary Kabul, Kandahar, and the regions between Sindh and Herat.

He got to know the opinions of ancient Sanskrit pundits from Pundit Madhusudan Gupta. Asiatic society's Pundit Kamlakanta Chakravarty informed him about Hindu plant science. M.D. Kasta provided him data about plant science published in Parsi and Hindi languages. Many contemporary Indians used to mix vegetables, siddhi, and bhang together as a drinkable liquid. During that time, there was a particular process used to make siddhi. Even well-to-do Muslims were familiar with this process.

One of the established processes during that time was to use tobacco mixed with ganja. During that time, majoon or a type of narcotic confection was made by mixing sugar, butter, flour, milk and siddhi or bhang. A well-known person called Amir in Calcutta made majoon in front of O'Shaughnessy quite a few times. In contemporary Calcutta, seven or eight people

were familiar with this process.

Customers used to get their majoon made from these people according to their own needs. Contemporary Arabian and Parsi doctors used to think that using majoon for a long time did not lead to bad results such as insanity and infertility. They observed increased appetite and libido...

O'Shaughnessy did not limit himself only within medical science and chemistry. His contribution in transmitting telegraph news through electrical science was unparalleled. In November 1853, the work of the first telegraph transmission was started between Calcutta and Agra, and it ended the following March. In January 1855, the work from Agra to Bombay and Atak was started.

He was an Honorary Fellow of the London Royal Medico-Botanical Society. He was a corresponding member of the England Medical Association and Washington's National Institution.

He retired from work in 1862 and on January 22, 1889 he died at 80 years of age.