

A BRIEF HISTORY OF JENNERIAN VACCINATION IN JAPAN

JENNER'S genius and persistence triumphed over smallpox epidemics which had flourished among people all over the world. Within two years of his discovery his method was introduced into many countries, with the exception of Japan, and before his death it had become known and used in all civilized communities throughout the world.¹

Vaccination was transmitted into the United States by Benjamin Waterhouse, the first Professor of Medicine at the new medical school at Harvard College. It was also adopted throughout Europe. In Italy and some other European countries, it was introduced by Luigi Sacco of Milan, one of Jenner's staunchest supporters. In the Russian empire, a successful vaccination was made in November 1800 by Otto Huhn in Riga (Latvia), using Jenner's vaccine brought by a tradesman from London.² Shortly after Huhn, it was actively promoted and practised by Professor Jefrem Mouchin of Moscow University, one of the most energetic pioneers in establishing vaccination in the Moscow Foundling Hospital. A boy who was vaccinated by Mouchin was at first christened 'Vaccinov' and was later raised to the peerage.

Before Jenner's method was generally accepted in Japan, several physicians had performed inoculations in some districts using lymph serum from vesicles of patients with variola vera. They were not successful however, because severe complications were very frequent.³

The first actual vaccination in Japan was made by Goroji Nakagawa in 1824.^{4,5} He was born in a small village, Kawauchi of Aomori, in the northern part of Japan, and became a guard of the trading house at Iturup in the Kurile Islands. In 1807 he was captured by members of a Russian fleet which had sailed on a trading mission to Japan, and he was taken to Siberia against his will and put to work there as a prisoner for about five years.

Immediately before his return to Japan, he was, by chance, working as a physician's assistant at Okhotsk, and there he was introduced to the miracle method of fighting smallpox. He learned to master the techniques and procedures of vaccination from the physician and from two books describing vaccination which were given to him, Nakagawa then returned to Matsumae, Hokkaido, and since at that time men returning from other countries were received as prisoners, he was placed under restraint by the Matsumae feudal clan.

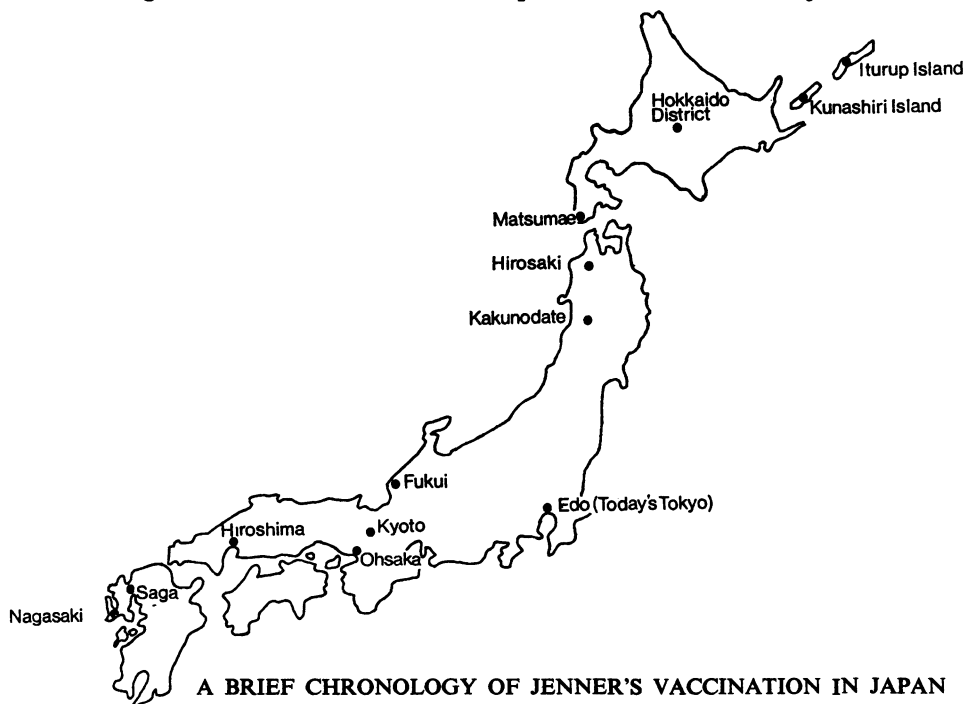
He became concerned about the prevalence of smallpox in Hokkaido and, in spite of the severe constraint of the Matsumae feudal clan, he decided to devote himself to rescuing people from it by the new method which he had just acquired from the Russian physician. Many inhabitants of the Matsumae district were vaccinated by him with satisfactory results. And some physicians such as Yuzo Shiratori,⁶ Keisaku Takagi, and Gentatsu Saito were instructed by him in the method of vaccination. However, it was transmitted only to the Akita district, and supposedly to the Aomori district by his disciples.^{7,8}

It should be recalled that it was about twenty-five years after Nakagawa's success that the Dutch physician, Otto Mohnike, and the Japanese physician Soken Narabayashi of the Nabeshima feudal clan successfully vaccinated one child out of three in Nagasaki using scabs brought from Djakarta.

News, Notes and Queries

In Japan, the introduction and acceptance of Jennerian vaccination were delayed in comparison with European countries and the United States. There were several reasons for this: (1) Japan is geographically very distant from England; (2) the dominant influence of China on Japanese medicine from ancient times; (3) national isolation policy of Tokugawa Shogunate; (4) indifference and inactive support of the government; (5) inadequate understanding on the part of the inhabitants of the effectiveness of vaccination.

The most important factor was the national isolation policy, which was promulgated by the Government for the first time in 1639. Thereafter, all Japanese were prohibited from travelling abroad and from trading with any foreign country, except China and Holland. The latter was the only western country permitted to trade with Japan, and it was through Holland that gradually the influence of western civilization penetrated Japan. In 1854 Japan concluded a commercial treaty with the United States, and was then opened to the world. Modern civilization, including the knowledge of medical science, came to Japan as a result of the Meiji Revolution.



- 1639 The Tokugawa Shogunate promulgates the National Isolation Policy.
- 1793 Dutch physician Bernhard Keller teaches Shunsaku Ogata about Turkish inoculation.
- 1798 Edward Jenner publishes 'An Inquiry into the Causes and Effects of the Variolae Vaccinae.'
- 1803 Hendrick Doeff, the head of the Dutch Trading House at Nagasaki, informs a Japanese interpreter, Sajuro Baba, about Jenner's vaccination.
- 1812 Goroji Nakagawa returns to Japan after five years in Siberia, having learned the method of vaccination from a Russian physician.
- 1818.6 Captain Gordon of the English ship *Samarang* tries to make a present to Baba of some instruments for vaccination, but he did not receive them.
- 1820 Sajuro Baba translates into Japanese a Russian book on vaccination brought by Nakagawa from Siberia. This is published by Sen-an Riko in 1850.

News, Notes and Queries

- 1824 Goroji Nakagawa practises vaccination with satisfactory results in the Matsumae district of Hokkaido, the first success of Jennerian vaccination in Japan.
- 1826.4 Franz von Sieboldt fails to vaccinate five children in Edo (Tokyo).
- 1837.7 American missionary doctor Peter Parker instructs the members of the Government of Ryuku Islands and practises vaccination on several persons.
- 1839 The Dutch physician Lishur fails to vaccinate two children at Nagasaki.
- 1841 Keisuke Ito, a Japanese physician translates and publishes Alexander Pearson's article on vaccination.
- 1841 Physician Shunsai Ohtsuki vaccinates successfully several children at Edo (Tokyo) but his example is not followed.
- 1842 Physician Dohkai Hayashi, Ryoei Ohishi vaccinates twelve children, without success.
- 1846.4 B. T. Bettelheim, English missionary doctor, teaches the method of vaccination to a physician, Kijin Nakachi, in the Ryukyu Islands.
- 1846 Hakuo Kasahara petitions for unspoiled vaccine.
- 1847 Hoshu Oyawa publishes *Into Shuto Zensho* (Text of Vaccination).
- 1847.8 Daimyo Kanzo Nabeshima of the Nabeshima feudal clan commands Soken Narabayashi to import vaccine-lymph.
- 1848.6 Soken Narabayashi emphasizes the use of 'scab' rather than 'lymph' for vaccination.
- 1848.9 Goroji Nakagawa dies at Matsumae.
- 1848 Kijin Nakach succeeds in vaccinating children using his own vaccine in Ryukyu.
- 1849 Dutch physician Otto Mohnike and Soken Narabayashi succeed in vaccinating one child out of three at Nagasaki using scabs of cow-pox from Djakarta.
- 1849 Otto Mohnike distributes vaccine lymph to the various areas as follows:
 July 17—The first success by Mohnike
 August 6—to Saga area by Soken Narabayashi
 September 21—to Hiroshima area by Shumrei Miyake
 September 22—to Kyoto area by Teisai Hino
 October 16—Teisai Hino founds Jotokan (Vaccination House) at Kyoto
 November 7—to Osaka area by Ko-an Ogata
 November 11—to Edo (Tokyo) by Genboku Ito
 November 25—to Fukui by Hakuo Kasahara
- 1850 Senian Rikoh publishes *Rosia Gyuto Zensho*, Rissai Kuwata writes *Sanka Shinoho*.
- 1852.11 Vaccine of Mohnike sent to Hirosaki area from Edo by Shoun Karoji, who obtains good results.
- 1852.4 To-an Takahashi, disciple of Sen-an Rikoh, vaccinates many inhabitants in the Kokunodate area of Akita.
- 1857 Rissai Kuwata and others vaccinate about six thousand Ainos in Hokkaido. The first compulsory vaccination in Japan.
- 1857 Genboku Ito, Seikai Tozuka and others found a private 'vaccination house' at Edo. Three years after, this becomes the Government Vaccination House.
- 1860.9 Shunsai Ohtsuki of the Sendai feudal clan, becomes the first head of the Government Vaccination House.
- 1863 The Government Vaccination House is renamed 'Institute of Western Medicine'.
- 1868 Meiji Revolution.
- 1870.4 Vaccination on a nation-wide scale is performed.
- 1871 New vaccine imported.
- 1871.11 Department of Vaccination founded in Daigaku Higashiko, Medical College in Tokyo.
- 1874 Vaccine Farm of the Education Ministry founded in Tokyo.
- 1876.9 The compulsory vaccination Act passed.

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