

## **The Deadly Hemorrhagic Form of Smallpox: An Epidemic Disease in British Colonial India**

Swati Shastri

(Research Scholar) Department of History Babasaheb Bhimrao Ambedkar University, Lucknow

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**Abstract:** India is a vast country with its diversified ecological zones and its own peculiar diseases, which were difficult to prevent with the limited resources. When the British came to India, they were only avoiding the diseases but in the nineteenth century they started making attempts to reduce sickness and mortality among the natives. Ayurveda and the Unani medicines were the main streams of the health care. In British India, there were a set of epidemic diseases; like cholera, leprosy, malaria, plague and smallpox. Smallpox is a deadly hemorrhagic form of smallpox, which is influenced by the poor sanitation and malnutrition. Hindu mythology is a large body of traditional narratives. Hindu goddess was widely worshipped in North India called 'Shitala' as a smallpox protector. Indian people are having blind faith upon traditional medicines, comprises of plants, herbs and trees. 'Rinderpest', a form of smallpox; an infectious disease, only the second disease in history to be fully wiped out, following smallpox. The British government took great efforts to prevent diseases. A variety of medical, political, religious and social servers kept on searching for effective means of controlling it spread. Smallpox was the main target during that period, although vaccinations were also carried out. 'Edward Jenner', an English Doctor; has made great achievements by inventing the vaccination against the smallpox variolation. . The global eradication of smallpox is arguably the greatest achievement of 20<sup>th</sup> century medicine. WHO Health Assembly made a concerted call for global smallpox eradication in 1958.

**Keywords:** British Government, Edward Jenner, Global Eradication, Goddess Shitala, Smallpox etc.

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### **I. Introduction**

#### **Public health in British Colonial India**

India is a vast country with its own diversified ecological zones ranging from the world's mountains to plain green fields and from tropical forests to barren deserts. Such a diverse region had its own peculiar diseases, which were difficult to prevent with the limited resources. Earlier in the year between 1760-1860, India was the main focus of European Colonial expansion as it was a rich country. British were believed that they are superior to the native people of India with their ability, integrity, science and technology as they introduced communication by building railways, telegraph lines, roads, irrigation, hospitals and all necessary for the civilization. During the eighteenth century, Europeans were only avoiding the diseases rather than actively to prevent it, there efforts were only focused on to protecting the British civilians and the army cantonment. Sanitation was given the top priority at that time. But, in the nineteenth century, they started to take attempts to change the environment to reduce sickness and mortality. Sanitary commissioners were also getting appointed as it was the direct responsibility of colonial government to oversee the health of the population. Before the colonial period, public health activities were very little known to the society. Ayurveda was the main stream system of the health care. During the colonial period, public health was replaced by the hospitals and health centers and medical services.

### **II. Deadly Haemorrhagic Disease**

#### **Smallpox: An Epidemic Disease**

British India was having a number of epidemic diseases in its own ecological zones, which were affecting the people rigorously, like; cholera, plague, leprosy, malaria, smallpox etc. Smallpox is an epidemic disease, which was not new to the modern India. A reference to this disease dates back over 2000 years ago, showing that it was an ancient affliction to India. Smallpox is very dangerous disease but it is not a hereditary disease, it is a dying disease. However, smallpox caused to spread indirectly influenced by poor sanitation and malnutrition. There was world eradication campaigns held to stop spread of smallpox by throwing vaccination to the infected people. After vaccination campaign in India throughout the nineteenth and twentieth century's, the **World Health Organization certifies the eradication of smallpox in 1979**. Smallpox is the most feared epidemic disease among all the diseases persist in India. Smallpox is an infectious disease caused by two viruses, **Variola major & Variola minor**. When the British came to power in India, they faced the challenges of new set of disease that were endemic in different regions. Smallpox had devastating effects during colonial period. It was widespread and caused several thousands of deaths in colonial India. British officials in colonial

India were aware that smallpox could transcend racial and geographical barriers, so this concept has left a deep imprint on the mind of officials for the designing of their policies of smallpox control. Epidemic emergencies' were promptly announced, almost as soon as a few specific cases were confirmed. They suggested Smallpox; an epidemic could involve scores, hundreds or thousands of cases –because of its highly contagious nature of smallpox.

### III. Hindu Mythology

#### *Hindu Goddess of Smallpox: Shitala*

Hindu mythology is a large body of traditional narratives. It is having a large range of diverse traditions and culture, developed by different sects and people in India. Some Gods and Goddesses are associated with specific elements or functions. Among the Goddesses, Shitala is the goddess of smallpox and her temporal blessing. The Hindu goddess Shitala was worshipped and feared during her reign. It was believed that this goddess was both evil and kind and had the ability to inflict victims when angered, as well as calm the fevers of the already affected. Shrines were created where the natives of India, both healthy and not, went to worship and attempt to protect themselves from this disease. Some Indian women, in an attempt to ward off Shitala, placed plates of cooling foods and pots of water on the roofs of their homes.

Shitala; Sitala, is a Hindu goddess widely worshipped in North India, West Bengal, Nepal, Bangladesh and Pakistan as the pox-goddess. India has created a goddess called Shitala in response to its exposure to smallpox. She is the goddess of sores, ghouls, pustules and diseases in the Hindu Mythology. She is having a broom as a weapon in her hand to continue to move the disease and a pot of cool water in the other hand in an attempt to soothe victims and her mount is donkey. She is worshipped by the Hindus, Buddhists and the tribal communities as well in India. The goddess Shitala is mentioned in early tantric and puranic literature and the vernacular texts have contributed to strengthen her role. Shitala is worshipped as a protector of Smallpox. Sometimes, she is said to be carrying a bunch of neem leaves, an ancient Ayurvedic medicinal herb that is believed by some to be an effective remedy to most skin diseases even today.

### IV. Traditional Medicine

#### *Healing from Endemic Diseases*

Traditional medicines are having an important role in Indian context. Indian people are having their blind faith upon traditional medicines, consists of plants, herbs and trees. In India, the plant is variously known as 'sacred tree', 'heal all', 'nature's drugstore', 'village pharmacy' & 'panacea for all diseases'. Product made for their medicinal properties to heal the skin diseases in many ways. It is considered a major component in Ayurvedic and Unani Medicine & it particularly prescribed for skin diseases. Neem oil is also used for healthy hair, to improve liver function, detoxify the blood, and balance blood sugar levels etc.

### V. Form Of Smallpox

#### *Rinderpest: An Infectious Disease*

Rinderpest is an infectious disease of cattle or domestic buffalo. It is like form of smallpox itself. In India, there were a number of world eradication program has been conducted against the epidemic disease called smallpox. After a global eradication campaign, the last confirmed case of Rinderpest was diagnosed in 2001. In 2010, the United Nations Food & Agricultural Organization announced that field activities in the decades-long, world-wide campaign to eradicate the disease were ending, paving the way for a formal declaration in June 2011 of the global eradication of Rinderpest. The United Nations confirmed the disease was eradicated, making **Rinderpest only the second disease in history to be fully wiped out, following smallpox.**

### VI. Disease Control And Prevention

#### *Negligence of Environmental Hygiene*

Epidemic diseases that had devastating effects during that period were plague, leprosy, cholera and malaria. In British India no one was earlier familiar with the smallpox. And as we know smallpox was affecting the natives in many ways. Prevention and environmental hygiene had long been neglected in India. The British government took great efforts to prevent diseases but due to insufficient medical officers and funds they could not succeed in that plan. But the controls of smallpox in this country have signally been failed. So a variety of medical, political, religious and social servers kept on searching for effective means of controlling its spread. Smallpox control measures could also range from religious ceremonies like the worship of the goddess Shitala to the inoculation of Human with live Variola Virus Variolation or more benign animal-pox-based viruses vaccination. Vaccination would seem to be less effective in protecting the individual in a hot country like India than in temperate climes. However that, may be the effect of vaccination in protecting the community in India has obviously been a lamentable failure.

## VII. Vaccination Of Deadliest Disease

### *A Major Weapon in Man's War on Disease*

The history of smallpox holds a unique place in medicine as it was the endemic disease and it was difficult to eradicate completely. The history of vaccination can be traced back to 1802 when a Superintendent General of Vaccination was appointed in India after the discovery of its Vaccine. Great efforts were made for the vaccination under the charge of the superintendents of vaccination. Smallpox was the main target during that period, although vaccinations were also carried out for plague and other diseases. Variolation; which was an eastern inoculation technique, was also used initially to control smallpox. It was one of the deadliest diseases known to humans; it is also the only disease to have been eradicated by vaccination.

## VIII. Edward Jenner

### *An Era of Accelerated Advances in Medicine*

Edward Jenner was an English Doctor, born at Berkeley, England. He made an achievement by his great discovery. While smallpox claimed a continuously high toll, striking the rich and poor alike, Dr. Jenner learned about the cowpox virus infecting the humans. Cowpox is an uncommon illness in cattle, usually mild, that can be spread from a cow to humans via sores on the cow. During an infection, dairy workers may have pustules on their hands. Sufferers can spread the infection to other part of the body. The cowpox virus belongs to the Orthopox family of viruses. Orthopox viruses also include monkey pox virus and Variola viruses, which cause smallpox. Today, in an era of accelerated advances in medicine, the achievement of an English clergyman's son born two centuries ago is still a major weapon in man's war on disease.

## IX. GREATEST ACHIEVEMENT OF 20<sup>th</sup> CENTURY

### *The Global Eradication of Smallpox*

The term eradication was used in a sense to tackle the global incidence of certain diseases. The global eradication of smallpox is arguably the greatest achievement of 20<sup>th</sup> century medicine. The smallpox story warns us that public health policies cannot be imposed with any confidence from the top. World Health Organization Health Assembly made a concerted call for global smallpox eradication in 1958. India, because of its size, its geographical, political & social diversity and its regular smallpox outbreaks was identified as a particularly challenging field of operations. In British India a program was launched to propagate smallpox vaccination, through Indian vaccinators, under the supervision of European officials.

## X. Conclusion

### *Medicine as a Tool of Empire*

British advent to India primarily focuses on its own motive that is from economic point of view. Instead of doing input, their aim was to get as much as they can. India being vast country with large number of population having different beliefs, faiths, opinions etc. but their existed some certain issues, where a single attempt was more than enough. For example diseases, medicines etc. here an attempt was to make you clear that how the state of medicine was neglected regarding the healing of a disease called smallpox. British late efforts to prevent smallpox from spreading depicts that when it became almost impossible to prevent the British officials from protecting from this highly contagious disease, then the colonial government started some preventive measures. But as usual here they again neglected the Indian mindset of treating these diseases; that is the traditional practices of healing smallpox.

Although there were groundbreaking works on a variety of diseases, which proved to be very helpful in the prevention of epidemics, the British government of India discouraged innovation and research due to a lack of funds and other difficulties. This branch of medical system had long been neglected in India. In the late 19<sup>th</sup> and early 20<sup>th</sup> century, situation improved and it was widely accepted that medical research was an integral part of preventive medicine. Medicine is therefore often seen as a 'tool' of empire, although this concept has been broadened to include the colonialization of the mind as well as the body. Medical knowledge and sanitary regulations are said to have imparted very different cultural ideas and to have been an important colonizing force in their own right. Thus attempts were made initially but became successful after a very long time.

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