Smallpox Inoculation

Smallpox is a contagious disease and has infected mankind for a very long time. During the 18th century in Europe, smallpox was one of the greatest killers, people were shrouded by the fear of the spread of smallpox. Edward Jenner (1749 – 1823), an English doctor, was eager to contribute to the prevention and treatment of the disease.

Although Jenner did not know how or what should be done to deter smallpox disease, he discovered the cure to the disease in one of his outpatient visits. When a milkmaid went to see him for treatment for an unknown disease, he diagnosed the milkmaid as having smallpox. However, the milkmaid did not agree with his diagnosis.

The milkmaid pointed out that the symptoms were merely cuts made by iron milk barrels, which later got infected by the pox on cows' bodies during the milking process. The cuts would eventually turn into blisters after three days of infection. According to the milkmaid, milkmaids were generally immune to smallpox, and almost everyone had such blisters in certain parts of their life. Jenner remained dubious over the milkmaid's remarks.

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Smallpox Inoculation

The milkmaid did not return for a follow-up treatment, even after a week. To solve his doubts, Jenner paid a visit to the cow milk factory. In the factory, he saw the milkmaid happily mingling around her companions in high spirits. Most importantly, the blisters on her hands had disappeared! Upon seeing the scene, Jenner was full of surprise.

Just like all other scientists and inventors, Jenner persistently did self-enquiry over the doubts he had in his mind. He kept thinking on why milkmaids did not contract smallpox, and whether cowpox and smallpox were related. It was then that he began his research on cowpox.

This was however not a short-term task. Jenner spent twenty years of his life observing and recording in detail the process and symptoms of humans contracting cowpox. He first experimented cowpox and smallpox inoculation on animals. After having proved that all animals infected with cowpox did not contract smallpox at all, he shifted his focus to inoculating smallpox in humans using cowpox.

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Smallpox Inoculation

Although Jenner faced objections from his relatives and friends, he insisted on accomplishing the test. In 1796, he inserted pus taken from a milkmaid with cowpox, into an incision of an eight-year-old local boy's arm. One week later, the test was successful. In order to prove that people inoculated with cowpox will definitely not be infected with smallpox, he exposed the small boy with smallpox.

Jenner awaited the outcome in anxiety. After half a month, the small boy was still alive – he was found to be immune to smallpox! The test of smallpox inoculation using cowpox was an unprecedented success in human and medical history.

Food for Thought:

- Using the leads given by the milkmaid, Jenner found the solution in treating smallpox. It shows that perceptiveness is needed in inventors or innovators. Holding on to useful clues will lead you to success.
- Although Jenner faced mixed reactions from society, he insisted on inoculating cowpox and smallpox for humans. It was this action which brought about the breakthrough in the medical world. This further proves that inventors and innovators must have an adventurous spirit in order to conquer challenges and to achieve success.

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