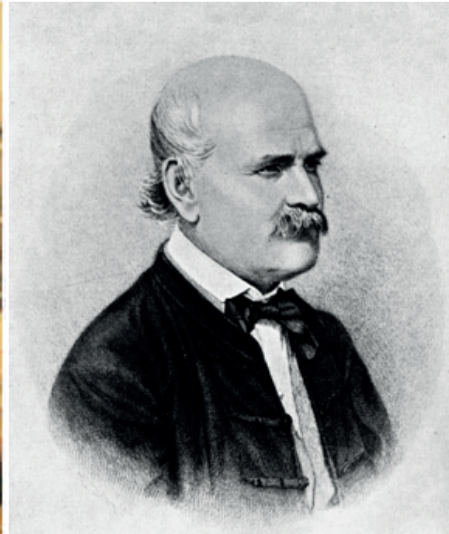


From the Pages of History

Ignaz Philipp Semmelweis (July 1, 1818 – August 13, 1865)^{i, ii, iii} "Saviour of Mothers"

Dr. Ramesh Rao, Professor and HOD, Dept. of Pathology, Chettinad Hospital and Research Institute, Chennai, India

Chettinad Health City Medical Journal 2014; 2(2): 69 - 69



Being ahead of your time is not always rewarding as you are likely to be misunderstood. If you question the prevalent dogma in uncompromising and non-conciliatory manner, you are likely to be ridiculed and ostracised. History of science is replete with records of such unfortunate thinkers. Ignaz Philipp Semmelweis was one such who paid heavily for his ideas.

Semmelweis was born on 1st of July, 1818 in Taban (present day Budapest), Hungary to a wealthy Jewish family. Initially he wanted to study law but for some unexplained reason took up medicine. In 1844, he obtained his master's (Magister) degree in medicine from University of Vienna. Having failed to obtain an appointment in internal medicine clinic, he decided to specialise in Obstetrics. One of his teachers was Karl von Rokitansky.

On 1st of July 1846, he joined as assistant at First Obstetrical Clinic of the Vienna General Hospital (equivalent to chief resident). In those days Vienna General Hospital used to run two maternity clinics with admissions on alternate days. These clinics were run on similar lines except for one difference: the first clinic was used for training medical students while the second clinic was used for instruction of nurses only. Even outsiders knew that the first clinic had a high maternal mortality rate (~13%) due to high incidence of puerperal fever (childbed fever). In comparison, the second clinic had a mortality rate of around 3%. Most women used to be admitted to second clinic.

This worried Semmelweis. He decided to investigate why there is such a high mortality in the first clinic. At around the same time, one of his close friends died of a fever similar to puerperal fever which developed after he sustained a wound while performing autopsy. This prompted Semmelweis to connect cadaveric contamination with puerperal fever. He hypothesized that he and medical students carried the "cadaverous

particles" from autopsy room to the patients they examined in first clinic. This also explained why there was lower death rate in the second clinic as the midwives were not involved in autopsies or surgery.

As a corrective measure, he made hand-washing with chlorinated lime (hypochlorite solution) compulsory before examining patients in first clinic. This simple but revolutionary procedure brought the mortality rate dramatically down to the level observed in second clinic. But he was a shy man. He did not initially publish his findings. But many of his students tried to popularise his ideas. There was lot of resistance and ridicule from his colleagues. Among those who opposed his ideas was influential Rudolf Virchow. As the germ theory of disease was still unknown and "miasma" (bad air) was considered to be the cause of disease, nobody wanted to accept the ideas of an expatriate. Semmelweis was forced to leave Vienna. However, he achieved similar success in many other hospitals he worked. He published his observations finally in 1861 in the book "The Aetiology, Concept and Prophylaxis of Childbed Fever."

By then he had developed a nervous disorder (probably post-traumatic stress disorder). He was admitted in mental asylum in 1865 where he was severely beaten up by guards and confined to a darkened cell. He died two weeks later of internal injuries and sepsis similar to puerperal sepsis that he tried to eliminate from clinical practice. He was only 47 years old.

Recognition came only after Louis Pasteur acknowledged Semmelweis's contribution when he proposed the germ theory of disease. Semmelweis is now universally recognised as the pioneer of antiseptics.

i- <http://www.sma.org.sg/smj/4701/4701ms1.pdf>

ii- http://en.wikipedia.org/wiki/Ignaz_Semmelweis

iii- <http://explorable.com/semmelweis-germ-theory>