

# Childbed fever – the Semmelweis myth

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1700s, showed that the occurrence of childbed fever could be drastically cut down by isolating victims and insisting on cleanliness. By 1795, Alexander Gordon, of Aberdeen, had come to the radical conclusion that, like many other doctors, he had accidentally spread the disease and had caused the death of many women in his care.

## ● Semmelweis

Semmelweis began his work on puerperal fever in 1846 and it was first published in 1847. He became aware of the disease following a change in hospital practice. The Vienna hospitals had originally followed the methods of Charles White. These had produced a very low death rate from puerperal fever, but when they were abandoned and cadavers were once again used to demonstrate midwifery techniques, a dramatic increase in mortality resulted. Semmelweis concluded that childbed fever was spread by a poison found in dead flesh (the so-called 'cadaveric principle'), although the

germ theory is mentioned in his book published in 1861 which treated the topic in detail. He boldly stated that, '*Puerperal fever is not a contagious disease, but it is conveyable from a sick to a sound puerpera by means of decomposed organic matter.*'

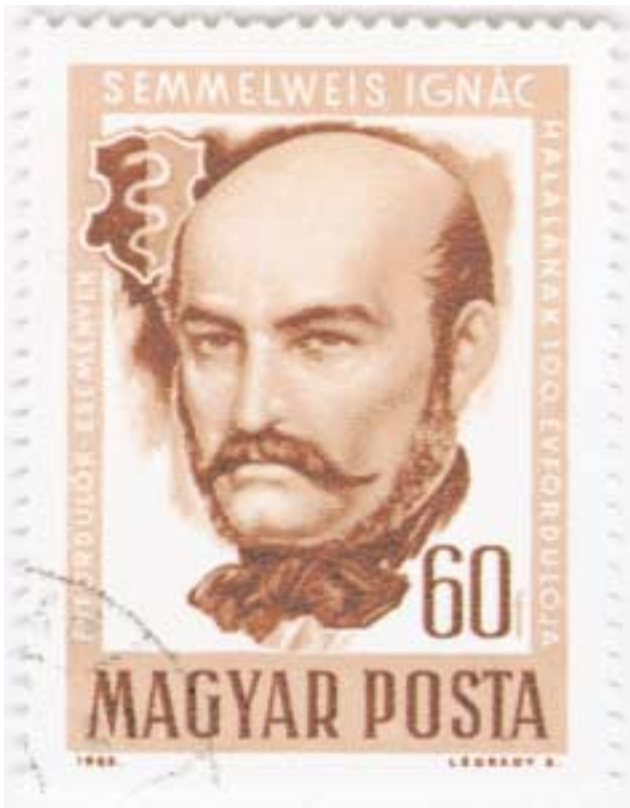
By insisting that the cadaveric principle alone caused childbed fever, Semmelweis invoked the wrath of his critics. The Dublin-based physician, John Denham, for example, pointed out (in 1862) that Semmelweis overlooked the fact that childbed fever frequently appeared in towns where there were no lying-in hospitals or dissecting rooms, and in rural districts where medical practitioners were seldom called upon. Many of Semmelweis' forebears and contemporary critics were also aware of the link between puerperal fever and both erysipelas and scarlet fever. Such observations can now be readily explained by the fact that puerperal fever is caused by the haemolytic streptococci which are spread on unwashed hands and on the breath of anyone carrying *Streptococcus pyogenes*.

Was Ignaz Semmelweis really the first to show that puerperal fever is contagious, or is the famous story just a satisfying myth? Milton Wainwright investigates.



ABOVE:  
Charles White (1728–1813).

TOP LEFT:  
A centenary postage stamp from Hungary (1965) celebrating Ignaz Philip Semmelweis (1818–1865).



Before the introduction of prontosil and then penicillin, childbed, or puerperal, fever was the scourge of childbirth, leaving many babies without mothers. Even today, puerperal sepsis kills some 100,000 women a year worldwide. The disease is now known to be caused by haemolytic streptococci, but long before the microbial theory of infection was discovered, Ignaz Philipp Semmelweis (1818–1865), a Hungarian gynaecologist who practised in Vienna, showed that the incidence of puerperal fever could be reduced by antiseptic techniques such as rigorous handwashing. Semmelweis was largely ignored or ridiculed by his contemporaries and died of a staphylococcal infection in an asylum for the insane. But was he really the first to show that childbed fever is contagious, as is commonly believed?

As long ago as 1905, C. J. Cullingworth had his doubts when he stated that, '*We English-speaking people on both sides of the Atlantic, while giving abundant honour to Semmelweis, have been in danger of forgetting the earlier and equally remarkable contributions to our knowledge of puerperal fever.*' J. P. Greenhill also pointed out in 1936 that the contagiousness of puerperal fever had been recognized long before Semmelweis even thought about the disease.

One such pioneer in this field was the Manchester-based physician Charles White, who as early as the late

RIGHT:  
Oliver Wendell Holmes  
(1809–1894).

### ● 'Elementary My Dear Holmes'

To an American reader the name of Oliver Wendell Holmes is more usually associated with belle-lettres and poetry than with medicine. In 1843, however, Holmes wrote an article which appeared in the *New England Journal of Medicine and Surgery* entitled 'The Contagiousness of Puerperal Fever'. In this he agreed with White and Gordon that the disease was both contagious and was often transmitted, via an unknown agent, by both physicians and nurses. He also described how, in 1835, an un-named doctor had the 'good sense to change his clothes after each maternity-related visit and wash his hands in chloride of lime' – a practice usually credited to Semmelweis (in 1848). Holmes also referred to the fact that in 1821, an Edinburgh doctor called Campbell assisted in a post mortem and then spread the disease to a woman whilst attending a delivery. The same doctor attended an autopsy in June 1823 and, because he was unable to wash his hands, transmitted puerperal fever to two pregnant women. On the basis of his observations, Holmes recommended that physicians should:

- never attend autopsies prior to examining a pregnant woman,
- always change every article of dress after attending a delivery and allow 24 hours or more to elapse before conducting any further midwifery,
- always leave a period of at least a month between attending a case of puerperal fever and any uninfected patients,
- on finding three or more closely connected cases of puerperal fever in the practice (with no others existing in the neighbourhood) assume that they are the prima facie vehicle of the infection; and finally,
- regard it as their duty to pass on these warnings to nurses and assistants.

Like Semmelweis, Holmes was ridiculed for such views, which, it should be emphasized, were published in 1843, some 3 years before Semmelweis began his work.

### ● Conclusion

Historians place great emphasis on the fact that Semmelweis used an essentially modern statistical approach to demonstrate the contagiousness of puerperal fever; however, it is not for such subtleties that he is generally eulogized. Instead, we are told that he alone realized that puerperal fever was spread by doctors and could be prevented by antiseptic hand washing. As we have seen, this is simply not the case. It is noteworthy that when Semmelweis' work first became known the famous Edinburgh surgeon, James Young Simpson, fired off vitriolic letters to the medical journals refuting the idea that the Hungarian doctor should receive any priority on his ideas. Despite this intervention, the Semmelweis myth grew, and continues to be uncritically propagated – essentially because it is too good a story to miss. It satisfies our need to elevate the underdog to near



mythical status. In so doing, we ignore the many pioneers who went before Semmelweis and miss out on a more complex and far more fascinating story.

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### Further reading

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