

CHILDBED FEVER

A Nineteenth-Century Mystery

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PART I



Ignaz Semmelweis, a young Hungarian doctor working in the obstetrical ward of Vienna General Hospital in the late 1840s, was dismayed at the high death rate among his patients. He had noticed that nearly 20% of the women under his and his colleagues' care in "Division I" of the ward (that is, the division attended by physicians and male medical students) died shortly after childbirth. This phenomenon had come to be known as "childbed fever." Alarming, Semmelweis noted that this death rate was four to five times greater than that in "Division II" of the ward (that is, the division attended by female midwifery students).

Study Questions:

1. What were Semmelweis' initial observations?
2. What was the problem at hand?
3. What possible explanatory story might Semmelweis come up with?
4. How might Semmelweis test his suspicions?

PART II

One day, Semmelweis and some of his colleagues were in the autopsy room performing autopsies as they often did between deliveries. They were discussing their concerns about death rates from childbed fever. One of Semmelweis' friends was distracted by the conversation, and he punctured his finger with the scalpel. Days later, Semmelweis' friend became quite sick, showing symptoms not unlike those of childbed fever. His friend's ultimate death strengthened Semmelweis' resolve to understand and prevent childbed fever.

Study Questions:

1. What might Semmelweis now propose as an explanatory story?
2. How could Semmelweis test his new hypothesis?

PART III

In an effort to curtail the deaths in his ward due to childbed fever, Semmelweis instituted a strict handwashing policy amongst his male medical students and physician colleagues in "Division I" of the ward. Everyone was required to wash their hands with chlorinated lime water prior to attending patients. Mortality rates immediately dropped from 18.3% to 1.3% and, in fact, not a single woman died from childbirth between March and August of 1848 in Semmelweis' division.

Study Questions:

1. What conclusions can be drawn from Semmelweis' experiment?
2. How might Semmelweis revise his original hypothesis or his experiments to gain additional information?

PART IV

Despite the dramatic reduction in the mortality rate in Semmelweis' ward, his colleagues and the greater medical community greeted his findings with hostility or dismissal. Even after presenting his work on childbed fever (more technically referred to as puerperal sepsis) to the Viennese Medical Society, Semmelweis was not able to secure the teaching post he desired, and so he returned to Hungary. There, he repeated his successful handwashing attack on childbed fever at the St. Rochus hospital in Pest. In 1860, Semmelweis finally published his principal work on the subject of puerperal sepsis but this, too, was dismissed. It is believed that the years of controversy and repeated rejection of his work by the medical community caused him to suffer a mental breakdown. Semmelweis died in 1865 in an Austrian mental institution. Some believe that his own death was ironically caused by puerperal sepsis.

Study Questions

1. When presented with what appears to be unequivocal evidence in support of handwashing, why might Semmelweis' colleagues have dismissed his ideas?
2. How else might Semmelweis have approached the problem of disseminating his research findings in order to ensure their acceptance?
3. What, if any, role did serendipity play in Semmelweis' story of childbed fever?

Image Credit: Stamp of Ignaz Philipp Semmelweis, 1818-1865. Issued in Austria, 1965, on the 100th anniversary of Semmelweis' death.

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