'Ah, humanity. It's a train wreck, but I can't look away.'

It's 1843, and a debate is raging among physicians, about one of the most common killers of women. Childbed fever. Childbed fever strikes within days of giving birth, killing more than 70% of those infected, and nobody knows what causes it. Obstetrician Charles Meigs has a theory. Having observed abdominal inflammation in patients who go on to develop the fever, he claims this inflammation is the cause of childbed fever. Much of the medical establishment supports his theory.

'Oh, come on, they really leave me no choice but to teach them some skepticism.

'That's better. Now, Meigs, your argument is based on a fallacy, the false cause fallacy. Correlation does not imply causation. When two phenomena regularly occur together, one does not necessarily cause the other. So you say women who have inflammation also come down with childbed fever, therefore, the inflammation caused the fever. But that's not necessarily true. Yes, yes, the inflammation comes first, then the fever, so it seems like the inflammation causes the fever. But by that logic, since babies usually grow hair before teeth, hair growth must cause tooth growth. And we all know that's not true, right? Actually don't answer that.

'A couple of different things could be going on here. First, it's possible that fever and inflammation are correlated purely by coincidence. Or there could be a causal relationship that's the opposite of what you think, the fever causes the inflammation, rather than the inflammation causing the fever. Or both could share a common underlying cause you haven't thought of. If I may, just, what do you think causes inflammation? Nothing? It just is? Really?

'Humor me for a moment in discussing one of your colleagues ideas, Dr. Oliver Wendell Holmes. I know, I know, you don't like his theory, you already wrote a scathing letter about it, but let's fill your stud ents in, Shall we? Holmes noticed a pattern. When a patient dies of childbed fever, a doctor performs an autopsy. If the doctor then treats a new patient, that patient often comes down with the fever. Based on this correlation between autopsies of fever victims and new fever patients, he proposes a possible cause. Since there's no evidence that the autopsy causes the fever beyond this correlation. He doesn't jump to the conclusion that autopsy causes fever. Instead, He suggests that doctors are infecting their patients via an invisible contaminant on their hands and surgical instruments. This idea outrages most doctors who see themselves as infallible. Like Meigs here, who refuses to consider the possibility that he is playing a role in his patients plight. His flawed argument doesn't leave any path forward for further investigation, but Holmes' does.'

It's 1837, and physician Ignaz Semmelweis has reduced the number of childbed fever deaths in a clinic from 12% to 1% by requiring all medical personnel to disinfect their hands after autopsies and between patient examinations. With this initiative, he has proven the contagious nature of childbed fever.

It's 1879, and Louis Pasta has identified the contaminant responsible for many cases of childbed fever. Hemolytic stratocaucus bacteria.

'Hmm, my fries are cold. Must be because my ice cream melted.' (*wink*)