Epidemics: wash your hands! The asylum delivery and violent death of Professor Ignaz Philipp Semmelweis; and, the cursed Semmelweis reflex

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That hand hygiene is the single most important factor in the control of infection flows from Semmelweis (1818–1865), a Hungarian assistant obstetrician, who deduced in 1847 that the incidence of puerperal fever in Vienna’s Allgemeines Krankenhaus could be minimised by the use of hand disinfection in a chlorinated lime solution. Alas, Semmelweis did not live to reap the full fruits of his discovery, which was rejected, ridiculed and not widely adopted until after his death, via Pasteur’s confirmation of the germ theory of disease (1860s) and Lister’s (1865) successful surgical practice using a carbolic acid solution.

Codell Carter et al. (1995) relate from five surviving documents that on 13 July 1865, now Professor of Obstetrics at Pest, Semmelweis’s behaviour was so inappropriate that his wife thought he might be losing his mind. Two weeks later he was examined by his friend, a paediatrician, Dr Bőkai, who concluded that he required specialist attention. For 5 weeks his personal, sexual, professional and social behaviour had changed: he drank alcohol immoderately, went with a prostitute, wasted money, his nights were restless, his appetite great, he sweated profusely and he drank water excessively: affective or infective?

On 29 July 1865, János Balassa, Professor of Surgery, with Dr Bőkai and Professor Wagner, a physician, wrote a referral committing Semmelweis to a Viennese asylum. That evening, Semmelweis travelled with family to Vienna by overnight train on his way, he thought, to a German spa but, on arrival in Vienna next morning, on a pretext a former colleague, Ferdinand Hebra, a dermatologist, delivered him to the public asylum in Lazarettgasse near the Krankenhaus. There is no evidence that Semmelweis was examined or interviewed on admission, of who was in charge of him and who compiled the inconsistent records, contemporaneously or post hoc.

Initially he was excited, restless, confused, grandiose and behaving bizarrely: hot head, pulse 120 (subsequently 140). On the middle finger of the right hand there was contusion or gangrene, which he reportedly said ‘appeared of itself’ (but was not described pre-admission). He was intermittently put in a straitjacket. He fought with the attendant because he would not let him out, and he wanted to jump out of the window. Three (some say six) attendants could hardly control him. Ultimately, he was reportedly blue in the face, trembling and breathing with difficulty: gangrene worsened, boils were everywhere on his extremities and he had ‘An abscess (?) corresponding to the left thorax’.

Semmelweis died on 13 August 1865, aged 47. His body was dissected where he had performed autopsies seeking the cause of puerperal fever. His cause of death was, ironically, infection – pyaemia: acute gangrenous osteomyelitis of the middle finger of the right hand and a metastatic abscess extending into the thorax, with ‘in the left thorax an ichor source the size of a man’s fist’ – the said consequence of untreated injuries that Semmelweis received in the asylum.

The Semmelweis reflex is the reflex-like rejection of new knowledge because it contradicts entrenched norms, beliefs or paradigms.