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Killing the speckled monster: riots, resistance and reward in the story of smallpox vaccination

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Killing the speckled monster: riots, resistance and reward in the story of smallpox vaccination

Abstract

En route to the vaccination exhibition, it was easy to get distracted by the impressive variety of preserved specimens on display in one of London's most fascinating museums, the Hunterian. Jar upon jar of human and animal body parts as well as medical tools, skeletons, and other paraphernalia are enough to keep a visitor absorbed for hours. Happily, the Qvist gallery exhibition of Vaccination: Medicine and the Masses was equally captivating.

Keywords

killing, smallpox, story, reward, resistance, riots, monster:, speckled, vaccination

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Exhibition Review

Killing the Speckled Monster: Riots, Resistance, and Reward in the Story of Smallpox Vaccination

Vaccination: Medicine and the Masses.

An exhibition at the Qvist Gallery, Hunterian Museum, Royal College of Surgeons, 35–43 Lincoln's Inn Fields, London WC2A 3PE, UK

On display 19 April to 17 September 2016.

<https://www.rcseng.ac.uk/museums/hunterian/exhibitions>

Viewed on 14 June 2016.

En route to the vaccination exhibition, it was easy to get distracted by the impressive variety of preserved specimens on display in one of London's most fascinating museums, the Hunterian. Jar upon jar of human and animal body parts as well as medical tools, skeletons, and other paraphernalia are enough to keep a visitor absorbed for hours. Happily, the Qvist gallery exhibition of *Vaccination: Medicine and the Masses* was equally captivating.

The focus of this exhibit was the relationship between the medical profession and the public on the topic of vaccination. A striking object on display is a draft manuscript of the report written in 1798 by Dr Edward Jenner, the father of vaccination, that was to influence the global approach to combating infectious diseases.¹ Jenner experimentally inoculated a young boy called Edward Phipps with cowpox virus in an attempt to show that this so-called 'vaccination' with the mild disease, cowpox, could protect Phipps against the deadly smallpox virus. Jenner's report of his success was recognised by the medical fraternity for its potential in delivering the masses from the scourge of smallpox; however, community concerns relating to safety of the procedure were rife. This is exemplified in the exhibition by George Cruikshank's 'The Cowpox Tragedy', a cartoon depicting people growing horns after being vaccinated with cowpox. Moreover, the introduction of vaccination was accompanied by resistance and scepticism about state-organised mass vaccination programs.

The exhibition included gruesome images of children and adults affected by smallpox, the 'speckled monster', demonstrating the devastating and permanent scarring of those 'fortunate' to survive

Image 2: Wax models showing the development of pustules following vaccination for smallpox. These are on loan from the Gordon Museum of Pathology, King's College London. Image courtesy of Hunterian Museum.

the infection. These images were accompanied by some interesting commentary on the broader social implications of smallpox such as women finding it more difficult to find a partner if they had survived the disease but were physically scarred.²

Jenner's thesis on the protection afforded by vaccination was a turning point in global public health history, but this exhibition reminds us that it wasn't a new idea. Hunterian visitors are introduced to Lady Mary Montagu, wife of the British Ambassador to Turkey. In the early 1700s she observed the Ottoman practice of inoculation against smallpox, known as 'variolation', and encouraged the practice on her return to England in about 1720.³ Whereas Jenner's vaccination involved the use of the cowpox virus, which is immunologically similar to smallpox but less dangerous, variolation involved inoculation with a small dose of smallpox virus, usually taken from the lesion or pustule of a mild case of the disease. This practice had been employed for hundreds of years in Europe and Asia, reportedly even as early as the tenth century in China, and certainly there by the mid-1550s.⁴ Lady Montagu was a staunch proponent of variolation and her influence resulted in members of the Royal Family being

‘variolated’ when she returned to England.⁵

Tools for vaccination are always interesting and the exhibit had some good examples. While most people have experienced vaccination using a sterile needle, this was certainly not the practice in the 1800s. It was common for practitioners to use one of the various vaccination tools to first break the skin by scraping, scratching, puncturing or lancing. Some of the cowpox vaccine material was then applied to the broken skin.⁶ Vaccine was obtained from lesions on a calf infected with cowpox or from a pustule from someone vaccinated in the weeks prior whose lesion demonstrated that the vaccine had ‘taken’, that is, was moist and infected. To be specific, it was the pus from the calf or recently vaccinated individual that was introduced into the broken skin of the new recipient!

The exhibition illustrates that opposition to vaccination has a long and, at times, violent history. For many, compulsory smallpox vaccination was considered a violation of civil liberty.⁷ Groups such as the National Anti-Vaccination League were formed and resistance was demonstrated through riots, posters, articles, and illustrations. Other anti-vaccination objections included claims that vaccination doctors were motivated by profit, and that vaccines caused other diseases such as cancer, syphilis, meningitis, and pneumonia.⁸

Image 3: Lancet used to inoculate patients against smallpox, Hunterian Museum, at the Royal College of Surgeons. Image courtesy of Hunterian Museum.

Similar fears and concerns still exist, evident in the unsubstantiated claims currently expressed that vaccines cause anything from autism to impaired immunity to poisoning; and in modern-day conspiracy theories of government cover-up of side-effects and industry profit.⁹ Then, as now, public perception was strongly influenced by the media and social commentary. George Cruikshank's wonderfully satirical cartoon demonstrates the power of illustration to spread fear in the eighteenth century. The power of the internet is surely a contemporary parallel.¹⁰

The extent of resistance demonstrated the strength of public objection to political might imposed in the name of public health. It took 180 years to eradicate smallpox and, doubtless, the impressive resistance to vaccination delayed what should have been a more rapid successful public health outcome.

One highlight of the exhibit is the Ministry of Health short film produced in 1951. The film, *Surprise Attack* follows a young unvaccinated girl who is diagnosed with smallpox.¹¹ It is an appeal to parents to have their children vaccinated in infancy, and represents a divergence in strategy to engage the community about vaccination, namely away from mandated vaccination into the realm of health promotion. It is interesting to note the comment from the doctor at the end of the film about the expansion of air travel and its potential for global transmission of the disease. The rapid transmission of severe acute respiratory syndrome (SARS) around the world in 2003 supports his prediction.

The exhibit concludes with a powerful series of photographs—'Smallpox is Dead', the front cover of the World Health Organization (WHO) magazine in May 1980, and a photograph of Ali Maow Maalan, a Somali cook, who was the last person to contract smallpox naturally before its eradication. The global collaboration to eradicate smallpox is testament to the power of governments working effectively with communities. The exhibition touches on two other viral diseases that have the potential to be eradicated with such a collaborative approach, namely polio and measles. While many countries are now polio-free, ongoing public health promotion and maintaining the pressure on this devastating viral disease is still required. There are still large barriers to success, including conflict impacting on organised vaccination programs, and violence against vaccinators in some countries continuing to affect the global eradication process.¹² Measles should also be on the eradication 'hit list' and the Hunterian exhibit shows how the media reporting of fraudulent

Image 4. Cowan's vaccination shield, on loan from Dr Jenner's House, Museum and Garden. Image courtesy of Hunterian Museum.

science can negatively impact on the public health advances made. The final image on display shows the scientific article by Dr Andrew Wakefield suggesting a link between the measles-mumps-rubella vaccine and autism.¹³ It caused widespread community concern and confusion about the vaccine, resulting in reduced vaccination uptake and increased disease. The article has since been retracted but the incident is a sobering reminder of the sometimes delicate status of vaccination as a public health intervention.

Public concerns, emotions, and beliefs about vaccination are as real now as they were two hundred years ago. This thought-provoking exhibition reinforces the importance of building and maintaining a strong and open relationship between the medical profession and the public.

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