

After Venus, mercury: syphilis treatment in the UK before Salvarsan

At the beginning of the twentieth century, the treatment of syphilis varied substantially in the UK. Two of the commonly used treatments—mercury and bismuth—were often used for long durations, which prompted the public health warning, ‘two minutes with Venus, two years with mercury’.¹ Beyond this variation in treatment, venereology itself was a topic taught to generalists rather than specialists.² Moral condemnation attached to those with syphilis, whose illness was often considered self-inflicted. Patients themselves, fearful of public scrutiny and stigma, often turned to quacks rather than face public clinics. Because UK hospitals refused to treat diseases considered to be self-inflicted, venereal diseases such as syphilis were excluded from the National Health Insurance scheme.³ Patients did not receive financial assistance for their treatment. Despite multiple calls for a national commission on venereal diseases,^{4–7} no coherent strategy to convene one occurred until a new treatment galvanised the field: Salvarsan.

In 1909, German scientist Paul Ehrlich ushered in a new era of disease-specific cures, or chemotherapies, with his antisyphilis drug, Salvarsan.⁸ Already a Nobel laureate for his immunology research, in the first decade of the twentieth century, Ehrlich focused on developing a ‘magic bullet’ a disease-specific chemotherapy. During this era, interest in laboratory medicine was on the rise following the discoveries of Louis Pasteur and Robert Koch,⁹ priming the scientific and popular community for a laboratory science breakthrough. In Ehrlich’s laboratory, early rabbit trials were followed by the first clinical trials in 1910. Within a year after issuing the first clinical reports, Ehrlich had distributed 65 000 doses of Salvarsan for the treatment of syphilis.¹⁰ Clinicians from around the world flocked to Germany for the opportunity to meet Dr. Ehrlich and receive the new wonder drug for their patients with syphilis. In the UK, Alexander Fleming was the first to employ Salvarsan, pioneering work in syphilis care that foreshadowed his later discovery of penicillin.¹¹

Adriane Gelpi,^{1,2} Joseph D Tucker^{1,3}

¹Institute for Global Health and Infectious Diseases, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

²Social Medicine Department, University of North

Carolina at Chapel Hill, Chapel Hill, North Carolina, USA

³International Diagnostics Centre, London, UK

Correspondence to Dr Joseph D Tucker, International Diagnostics Centre, Keppel Street, WCE1, London, UK; joseph.tucker@post.harvard.edu

Acknowledgements The authors would like to thank Dr. Lesley Hall at the Wellcome Library and Dr. Kevin Brown at the Alexander Fleming Laboratory Museum for archival assistance, and Catie Gliwa for administrative assistance.

Contributors AG and JDT drafted the article, revised it, and approved of the final version.

Funding Support for this work was provided by the Brocher Foundation, the UNC Center for AIDS Research (NIAID P30-AI50410), and the Social and Ethical Aspects of Research on Curing HIV Working Group (NIAID R01A108366-01). The Working Group’s composition and rationale is explained at <http://searchiv.web.unc.edu/>

Competing interests None.

Provenance and peer review Commissioned; internally peer reviewed.



CrossMark

To cite Gelpi A, Tucker JD. *Sex Transm Infect* 2015;**91**:68.

Received 7 September 2014

Accepted 27 September 2014

Sex Transm Infect 2015;**91**:68.

doi:10.1136/sextrans-2014-051778

REFERENCES

- 1 O’Shea JG. ‘Two minutes with venus, two years with mercury’-mercury as an antisyphilitic chemotherapeutic agent. *J R Soc Med* 1990;**8**:392–5.
- 2 Royal Commission On Venereal Diseases. *Lancet* 1914;**183**:1062–63.
- 3 Report on venereal diseases. Parliamentary Papers. London: Local Government Board, 1913.
- 4 Syphilis and the responsibility of the state. *Lancet* 1913;**181**:1810–11.

- 5 Morris M. A Plea for the Appointment of a Royal Commission on Venereal Disease. *Lancet* 1913;**181**:1817–19.
- 6 The Report of the Royal Commission on Venereal Diseases. *British Medical Journal* 1916;**1**:380–4.
- 7 The Report of the Royal Commission on Venereal Diseases. *British Medical Journal* 1916;**1**:345–6.
- 8 Ward PS. The American reception of Salvarsan. *Journal of the history of medicine and allied sciences* 1981;**36**:44–62.
- 9 Cunningham A, Williams P. The Laboratory revolution in medicine. Cambridge; New York: Cambridge University Press, 1992.
- 10 Schwartz RS. Paul Ehrlich’s magic bullets. *The New England journal of medicine* 2004;**350**:1079–80 doi:10.1056/NEJMp04802
- 11 Fleming A, Colebrook L. On the use of Salvarsan in the treatment of syphilis. *Lancet* 1911:1631.