

these premises, it was resolved to obtain larger, roomier property. An appeal was launched, a great two-day sale of work – “The Muckle Mercat” – was held, and the funds realized were sufficient to purchase Redlands, a large house in Great Western Road. The transfer from Lynedoch Place took place in 1924 and the hospital was renamed Redlands Hospital: Glasgow Women’s Private Hospital. There were fifty beds, nine of which were reserved for maternity purposes, two wards (a medical and a surgical), and a few private rooms. Three years later, adjacent property was acquired and adapted as a maternity unit with twenty-four beds. The story of Redlands thereafter was one of constant progress and development, the appointment of women consultants in the major specialities, including a woman dental surgeon, and by 1948 there were sixty-seven beds.

## THE ONE HUNDRED AND FIRST ORDINARY MEETING

This meeting was held in the Mitchell Library, Glasgow, on 20 March 1982. Dr Reginald Passmore presented a paper on the subject of:

### OSMOSIS AND CHOLERA: ON PUTTING TWO AND TWO TOGETHER

The French physician and physiologist, René Joachim Henri Dutrochet (1776–1847), introduced the word “osmosis” and demonstrated the effects of osmotic pressure in 1827.<sup>1</sup> In 1831, the first great cholera epidemic hit Europe. In the next year, a Leith physician, Thomas Aitchison Latta (c. 1790–1833), was treating patients with intravenous solutions of saline.<sup>2</sup> He was stimulated to do this by a young Irishman and an Edinburgh graduate, W. B. O’Shaughnessy, who had studied cholera briefly in Newcastle upon Tyne in December 1831, and in a short letter to the *Lancet*<sup>3</sup> set out correctly the chemical pathology of the disease, attributing the severe shock and collapse to the blood having lost “a large portion of its water,” and “a great proportion of its neutral saline ingredients”. Unfortunately, Latta used hypo-osmolar saline and its effects were transitory. This solution continued to be used by some physicians throughout the nineteenth century with very little benefit. It was not until 1908 that hyperosmolar solutions were used by Leonard Rogers (1868–1962) in Calcutta,<sup>4</sup> and effective treatment of cholera first became available.

In the seventy-six years between the papers of Latta and Rogers, both cholera and osmosis were repeatedly in the minds of doctors and chemists. There were six major epidemics of cholera in Europe. Thomas Graham (1805–69), a Glaswegian who became professor of chemistry at University College London in 1837, greatly

<sup>1</sup> R. J. H. Dutrochet, ‘Nouvelles observations sur l’endosmose et l’exosmose’, *Ann. Chim. Phys., Paris*, 1827, **35**: 393–400.

<sup>2</sup> T. A. Latta, ‘A letter to the Secretary of the Board of Health, London, affording a view of the rationale and results of his practice in the treatment of cholera by aqueous and saline injections’, *Lancet*, 1831–32, ii: 274–277.

<sup>3</sup> W. B. O’Shaughnessy, ‘Experiments on the blood in cholera’, *ibid.*, 1831–32, i: 490.

<sup>4</sup> Leonard Rogers and Maxwell Mackelvie, ‘Note on large quantities of hypertonic salt solutions in transfusions for cholera’, *Ind. med. Gaz.*, 1908, **43**: 165.

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extended knowledge of osmosis. In his textbook, *Elements of chemistry*, there are eight pages on osmosis and he clearly indicated its probable importance in biology. Extracts of this section were quoted at length in many of the textbooks of physiology, widely read by medical students and doctors at times when great cholera epidemics were raging.

The failure of the medical and chemical establishments to link together cholera and osmosis seems in retrospect a remarkable failure in constructive thinking. Had the two imaginative men, Dutochet and O'Shaughnessy, met by chance in 1832 in Paris or London, their conversation over a bottle of wine might have led to the means of saving many millions of lives.

### THE ONE HUNDRED AND SECOND ORDINARY MEETING

This meeting took place in University Hall, St Andrews, on 19 June 1982, when two papers were presented. The first, by Professor Ian A. D. Bouchier, was entitled:

#### WHALES AND WHALING: CONTRIBUTIONS BY THE MEDICAL PROFESSION

There is a rich heritage of literature related to the whaling industry. Much of it is documentary, natural history, and of a scientific nature; but at least one great work of art, *Moby Dick*, has emerged. Remarkably little has been contributed by the medical profession; remarkable because from the seventeenth century, each British whaler carried a surgeon, and he would have been the one man aboard with the requisite education and scientific training to observe and record events occurring during the voyage. The surgeon lived in the cabin and messed with the captain and mate. Very often, he had just taken his degree and had not yet settled into his practice. The reasons for doctors to undertake these voyages were varied: financial, love of adventure, and a desire to see new and unexplored parts of the globe, initially the Arctic, then the Pacific and South Seas, and, from the early part of this century, the Antarctic.

#### *John Lyell (1807–74)*

Lyell is the first of our medical authors. Born at Newburgh, Fife, he was a Licentiate of the Royal College of Surgeons of Edinburgh (1829) and later MD of St Andrews (1850). He kept a careful diary<sup>1</sup> of his voyage as surgeon on the whaler *The Ranger* from 1829 to 1833. The diary, located in the Perth Museum, has never been published. It is of considerable interest both as a record of whaling life and of travel, and contains charming and accurate watercolour illustrations of islands, fauna and flora, and whaling artefacts.

*Ranger* fished in the Pacific, both north and south of the Equator, and towards the end of the voyage, life was quite uncomfortable. Lyell relates how he had to sleep atop

<sup>1</sup> Diary of John Lyell, ship surgeon. Written on a voyage to the Southern Arctic Seas, 1829–33. I am grateful to the Curator of the Perth Museum for access to Lyell's diary.