

1832 cholera riots

Sir—Geoffrey Gill and colleagues (July 21, p 233)¹ provide a fascinating account of the 1832 cholera riots, and, as they point out, unrest was not confined to Liverpool.

According to Anning,² the Sunderland cholera outbreak in 1831 was preceded by a case in Hull, and the disease may well have been first imported to Yorkshire in rags from continental hospitals used for manuring hop gardens. The devastating effect of the illness, death sometimes following only hours after the first onset of symptoms, is graphically described in the observations of John Snow.³ The doctors in Snow's birthplace of York were among the first to take up Thomas Latta's⁴ treatment of intravenous saline for cholera victims, 30 patients being so treated, of whom four survived.⁴

Intravenous therapy was also used by John Mackintosh, physician to the Drummond Street cholera hospital in Edinburgh.⁵ He reported saline treatment given to 156 patients, of whom 25 survived. Mackintosh's workload was heavy, added to which he felt compelled to make frequent night visits because of "the young medical gentlemen being worn out, and also from the drunkenness that too often prevailed among the nurses".⁵

In Leeds, 702 inhabitants died from cholera. A temporary facility for cholera victims was stoned by an angry crowd who managed to break several windows. Although, as in Liverpool, there were undoubtedly fears relating to use of bodies for dissection, the instigators of this protest were probably local manufacturers wishing to exert pressure on the Board of Health to relocate the cholera hospital and thereby remove its negative effect on business and trade. Subsequent cholera epidemics in Britain included that of 1854, which provided further evidence to John Snow of the waterborne nature of the disease.

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- 1 Gill G, Burrell S, Brown J. Fear and frustration: the Liverpool cholera riots of 1832. *Lancet* 2001; **358**: 233–37.
- 2 Anning ST. The history of medicine in Leeds. Leeds: WS Maney and Son, 1980: 71.
- 3 Biography of John Snow. <http://www.ph.ucla.edu/epi/snow/snowbio.html>.
- 4 Needham JP. Facts and observations relative to the disease commonly called cholera, as it has recently prevailed within

the City of York. London: Longman, 1833.

- 5 Mackintosh J. Principles of pathology and practice of physic: vol 1, 4th edn. Philadelphia: Edward C Biddle, 1837: 332–73.

Reproducibility of Louis' definition of pneumonia

Sir—Pierre-Charles-Alexandre Louis, the 19th century French physician, is an important figure in the history of medicine. His work in tuberculosis and typhoid fever greatly influenced European and North American doctors.¹ He was also one of the first to advocate the use of quantitative measures in clinical research.²

His most famous application of quantitative measure was in patients with pneumonia who had undergone blood-letting at varying times since the beginning of their illness.³ Modern analysis confirms Louis' main conclusion that blood-letting was not indicated to treat pneumonia in these patients, and was possibly harmful to them.³

Louis' definition of pneumonia is a key element in his assessment; the conclusion might differ for other diagnoses. We tried to assess the agreement between Louis' definition of pneumonia and the diagnosis that contemporary pneumologists would give on the basis. We asked all registered pneumologists in the French-speaking region of Switzerland to read the clinical description of a disease studied by an unnamed 19th century physician and give their diagnosis. We provided the following paragraph.

"I have regarded as the commencement of the disease, the period when the patient has experienced a febrile affection, more or less violent, which has been quickly followed or accompanied by pain on one side of the chest and by rusty sputa; these two symptoms appearing at the same time, or nearly the same time; and I have regarded as the time of convalescence the period, at which the sick began to take some light nourishment, three days at least after the febrile action had ceased, although the local symptoms had not disappeared in every case; that is to say, at a period when percussion of the chest did not always elicit a perfectly clear sound at the part affected, and when the respiration was not very pure, the ear still discovering here and there some crackling and traces of crepitation. These are remnants of a severe morbid affection, which disappear in

convalescence, and with a rapidity in proportion to the promptness of the antiphlogistic treatment."

The quotation came from Louis' *Researches on the effects of bloodletting in some inflammatory diseases*.⁴ Louis' successes are widely known but original texts are difficult to find and have rarely been read.

Physicians were asked to give their first, second, and third most likely diagnoses. 43 (86%) of 50 eligible pneumologists responded. The most reported diagnoses were pneumonia, bronchopneumonia, pulmonary embolism, tuberculosis, or a combination of these. All the first diagnosis were pneumonia or bronchopneumonia. Pneumonia was the second most likely diagnosis, since 11 pneumologists put pneumonia as first diagnosis and bronchopneumonia as second choice.

Louis' definition must have included very few false-positive cases. 19 physicians, however, suggested pulmonary embolism in at least one choice. Hypovolaemia and shock after blood-letting⁵ could exacerbate hypotension and cause death. Thus, cases of embolism in patients bled earlier could have aggravated the verdict against blood letting.

Our survey shows that the criterion he used to define pneumonia patients eligible for his study on blood-letting was accurate but that pulmonary embolism could have biased his results.

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- 1 Lilienfeld DE, Lilienfeld AM. The French influence on the development of epidemiology. *Suppl Bull Hist Med* 1980; **54**: 28–42.
- 2 Vandembroucke JP. Evidence-based medicine and "medecine d'observation". *J Clin Epidemiol* 1996; **49**: 1335–38.
- 3 Morabia APCA. Louis and the birth of clinical epidemiology. *J Clin Epidemiol* 1996; **49**: 1327–33.
- 4 Louis PCA. Researches on the effects of bloodletting in some inflammatory diseases, 1836 edn. Boston: Hilliard Gray, 2001.
- 5 Auchincloss JH, Duggan JJ. Effects of venesection on pulmonary and cardiac function in patients with chronic pulmonary emphysema and secondary polycythemia. *Am J Med* 1957; **28**: 74–82.

DEPARTMENT OF ERROR

Effect of hydroxychloroquine on progression of dementia in early Alzheimer's disease: an 18-month randomised, double-blind, placebo-controlled study—In this Article by Willem A Van Gool and colleagues (Aug 11, p 455), the "K" in Philip K Scheltens' name should be removed.