

## Mary Shelley's migraines and fatal stroke: some observations on their primary cause

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**Abstract.** In this article the origins of Mary Shelley's neurological and cerebrovascular problems are described. Through a reanalysis of her biography, her early health issues caused by a dermatological condition, potentially eczema, psoriasis or chickenpox, are related, thanks to current biomedical knowledge, to her migraines and strokes, including the one that killed her. ([www.actabiomedica.it](http://www.actabiomedica.it))

**Key words:** chickenpox, eczema, history of medicine, herpes zoster, Mary Shelley, psoriasis, stroke

Mary Wollstonecraft Godwin Shelley's (1797–1851) (Fig. 1) final neurological ailments and death have long been attributed to the consequences of a brain tumour (Death Certificate: General Register Office, London. LMWS III: 389: «Disease of the Brain Supposed Tumour in left hemisphere, of long standing. Certified.») (1). The celebrated author of the famed novel *Frankenstein; or, The Modern Prometheus* (1818) had recurrent episodes of hemiplegic migraine characterised by unilateral weakness, intermittent aphasia, hemiparesis, convulsive seizures; these symptoms lasted for 12 years, a time frame which led scholars to dismiss the diagnosis of brain tumour (2). Instead, the most likely cause of her death was a recurrent, finally massive stroke. Despite this knowledge, its aetiology has never been investigated in depth, possibly due to a lack of combination of alternative lines of evidence (e.g. artistic and literary evidence, osteological and literary sources, etc.) as typically seen in recent multidisciplinary retrospective diagnoses (3).

A reassessment of the pathobiography of Mary Shelley revealed a dermatological illness that she had developed aged fourteen. This presented as an extremely painful condition involving one entire arm.



**Figure 1.** Mary Shelley's portrait by Richard Rothwell (1800–1868), exhibited at the Royal Academy in 1840, and currently held by the National Portrait Gallery (London). Image in the public domain from Wikimedia Commons.

Sampson postulated this to be eczema, an autoimmune condition which could not benefit from steroid therapy back in those days (4). Mary Shelley's arm, Sampson details, was thus «treated with 'poultices'», but the patient was «unable to move it at times and uses a sling. Rigid, and huge with bandages, her limb must feel like a monstrous appendage stitched from some other body on her own, as to the creature she invents in her first novel will be stitched together by Frankenstein» (4). Sampson also supports the idea that her father, the British philosopher William Godwin (1756-1836), might have also suffered from eczema, and that this disease could also explain the migraine attacks he – and his daughter – experienced through their lives (4).

Besides eczema, several more diagnoses were put forward, either made contemporaneously by the physician who visited her (Dr Cline) (4), or by her stepmother, but also retrospectively by the late British historian William St Clair (1937-2021), or the aforementioned British writer, Fiona R. Sampson. These include tuberculosis, leprosy, chickenpox and psoriasis (4).

As far as tuberculosis and leprosy are concerned, they can be considered to be ungrounded due to the lack of more suggestive symptoms and signs reported in the sources. It should be mentioned that diagnostic confusion between infectious diseases and their clinical presentation in the early 19th century stemmed from limited clinical knowledge; as a matter of fact, at that time, the germ theory of disease, the very heart of modern microbiology, had not yet prevailed, through the power of demonstrations, over the millennia-old miasma theory (5).

The remaining differential diagnoses of chickenpox, psoriasis, but also eczema can all produce long term cephalalgic outcomes (6-8). In the case of herpes zoster, the adult-age manifestation of chickenpox, headache is known to be a complication of its ophthalmic or encephalitic presentations (8). Moreover, as far as these three conditions' cerebrovascular outcomes are concerned, it must be underlined how these diseases, far from being merely cutaneous ones and irrespective of their aetiologies, are known to cause inflammatory statuses which end up playing a pivotal role in other bodily districts, for example affecting cardiovascular

health through atherosclerotic or thrombotic events (9-11). Concerning a potential retrospective diagnosis of chickenpox-herpes zoster, it should be underlined that, in the paediatric population, the clinical presentation often includes a whole-body rash, which cannot be confirmed in Mary Shelley's case, since the sources mention that the writer experienced the involvement of one arm.

In conclusion, only a palæopathological and palæogenetic study of Mary Shelley's mortal remains, buried in St. Peter's Churchyard in Bournemouth (Dorset, England), could ultimately solve the riddle of her juvenile diseases. Nevertheless, based on the available historical documentation and current medical knowledge, we propose that the writer's final cerebrovascular events originated from a dermatological condition – psoriasis, eczema or herpes zoster – she had already developed during her adolescence.

**Conflict of Interest:** Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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