

Dr. Zaher Nahle – Did Darwin have ME?

Charles Darwin lived in miserable health and debilitating fatigue until his death at the age of 73. It is quite ironic that one of the most recognizable names in the history of science, famed for his theory on “the origin of species,” was baffled by the origin of his own affliction. Darwin’s physical dysfunction was at times so incapacitating that it caused him extreme depression as well as a dying sensation. In his 50s, Darwin also experienced transient, yet immobilizing, paralysis with exertion in addition to frequent memory loss and difficulties in verbal expression—not unlike what is referred to as post-exertional malaise and “brain fog” in ME vernacular.

He often shunned company during severe episodes, at times for days on end, as many in our community are forced to do. Not even Darwin’s access to his elite network of fellow scientists or the best medicine of his time could explain the underpinnings of his symptoms or provide him relief. An English psychiatrist, Dr. John Bowdler, concluded that Darwin’s illness must be psychosomatic! Bowdler argued that Charles was still grieving the loss of his mother, who passed away when he was 8. Yet historians never described a grief-stricken Darwin, nor did he in his own autobiography.

Instead, what was verifiably documented is a slew of physiological and biochemical abnormalities like dysautonomia, visual disturbance, gastric dysmotility, abdominal pain, muscle wasting, lactic acidosis, peripheral neuropathy, tachycardia, dizziness, seasickness, nausea and severe headaches. All clinical manifestations that bear striking resemblance to the spectrum of ME symptoms and associated morbidities including Postural Orthostatic Tachycardia Syndrome (POTS).

An article in the journal *Genetics* by John Hayman suggests that Darwin’s disease could be mitochondrial in nature. Mitochondria are small but vital self-contained structures in every cell. They transform the power in nutritious sustenance into energy to fuel all human functions, physiological or cognitive. Hayman argued that Darwin’s illness was due to inherited mitochondrial mutations, that is, it was genetic, not psychological. The medical history of Darwin’s family, particularly on his mother’s side through which mitochondria are inherited, gives credence to this argument. His brother was chronically ill and lethargic, his mother suffered from chronically ill health as did her brother/Darwin’s uncle.

Myopathies of mitochondrial nature have been implicated in ME for quite some time and some studies have even suggested a correlation between the level of mitochondrial inefficiencies and the degree of ME severity. That said, considerable research work, in the context of investigating cellular bioenergetics, is needed to comprehend the full role and contribution of mitochondria to the pathophysiology of ME, especially since, especially since mitochondrial myopathies can be both inherited and noninherited.

Given the recent activity regarding ME at the federal level in the United States, I wonder what Darwin would do if he were living amongst us now? Would he be testifying on behalf of ME patients as an activist or would he be making remarks as a scientist to the National Institutes of Health?