Electrophysiological assessment of central and peripheral motor roots to the lingual muscles


Robert Bentley Todd (1809-60) and Todd's paralysis

Habitués of King’s College, London, are familiar with the Todd Prize and with Todd ward. One of 16 siblings, Todd’s father’s (Charles Hawkes Todd) other occupation was that of a well-known surgeon in Dublin. Bentley Todd, pupil of Robert J Graves, was author of many publications devoted to the anatomy and physiology of the nervous system. He published Diseases of the brain and other affections of the nervous system (1854); and edited the 6000 page Cyclopaedia of anatomy and physiology in five volumes (1835–59) celebrated for its scope and its scientific originality.1 Todd distinguished “three kinds of convulsions” — the jactitating or choreic, tetanic or tonic, and clonic or epileptic form, but he is best known for his account of postepileptic paralysis described in the Lumleian lecture:

A paralytic state remains sometimes after the epileptic convulsion. This is more particularly the case when the convolution has affected only one side or one limb: that limb or limbs will remain paralytic for some hours, or even days, after the cessation of the paroxysm, but it will ultimately perfectly recover.

Hughlings Jackson acknowledged the Todd and Robertson theory that the local paralysis after an epileptic seizure was due to exhaustion. He worked on peripheral neuritis, physiology of the afferent and efferent pathways of the cord. He helped the foundation of the first school of nursing with Florence Nightingale at St John’s House, Queen Square, London.

Born in Dublin, Todd graduated with a BA at Trinity College and LRCSI, then moved to Pembroke College, Oxford, graduating in 1833. He was anatomist, physiologist, and physician, lectured at the Aldersgate Medical school and replaced Herbert Mayo as Professor of Physiology at King’s College (1836–53), and became its first Dean.2 He was a Fellow of the Royal Society and a founder of King’s College Hospital in 1840. Amongst many distinguished pupils was his friend Sir William Bowman, FRS whose work On the structure and uses of the Malphighian bodies of the kidney disclosed the capsule and basement membrane of the renal tubules; Bowman’s membrane in the eye and his account of the ciliary muscle are well recognised.

Censor at the Royal College of Physicians, Todd gave the Goulstonian lectures (1839), Croonian lectures (1842) on “Practical remarks on gout, rheumatic fever and chronic rheumatism of the joints”, and the Lumleian lectures (1849–50) “On the pathology and treatment of convulsive disease.”

His seminal work on spinal cord disease, in volume 3 of the Cyclopaedia (1847) is almost certainly the first description of locomotor ataxy (tabes dorsalis) four years before Romberg and 11 years before Duchenne.3 He believed in the efficacy of hard liquor which he prescribed indiscriminately, and sadly, died of alcoholic cirrhosis, when leaving his consulting room in Brook street. Had he lived longer he would almost certainly have been a founder member of staff of the National Hospital, Queen Square, London which started in 1860, the year of his premature death.

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See also p. 359.

3 Hearshaw FJC. Centenary History of King’s College, London, 1929.