

# John Hughlings Jackson (1835-1911): an addition to his published writings?

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## Abstract

Attempts made hitherto to document the complete published oeuvre of John Hughlings Jackson have included the rider that more may yet be found amongst the multiplicity of journals serving the medical profession during Jackson's lifetime. Here I suggest a further item, a case of "treadler's cramp", previously noted indirectly in reports of the meeting at which it was presented but not in its original form which appeared in the *Transactions of the Medical Society of London* in 1891.

In his biography of John Hughlings Jackson, Samuel Grenblatt noted, in the context of the bibliography of Jackson's published papers, numbering more than 500, that "Doubtless there are still more out there" [1]. Briefly, I thought I had found one, and after further investigation this may still be the case. The story is as follows: In the *Transactions of the Medical Society of London* for 1891, under the heading "CASE OF TREADLER'S CRAMP. By J. HUGHLINGS JACKSON, M.D., F.R.S.", this brief note appeared:

Dr. RIVERS showed for Dr. Hughlings Jackson a case of treadler's cramp occurring in a man who, after having been a hand-loom weaver for thirty years, began to make mistakes in his work owing to defective treading with his right leg (the one principally used); later the right leg became lame, and after using the left leg for some years this became weak, rendering him unable to follow his occupation. The spasm occurred at the commencement of the flexion movement which accompanied the upward motion of the treadle, the extension or downward movement being well performed. The spasm was of the combined movement of the hip and knee, each joint being moved freely by itself. The difficulty was referred by the patient to the gluteal region, and both the gluteal and hamstring muscles on the right side showed decided diminution of faradic and galvanic irritability. The right leg was held stiffly in walking, the case thus agreeing with other occupation spasms in which large movements were concerned, and in which the affected limb was more or less generally disabled [2] [capitals in original].

As Greenblatt points out, most of Hughlings Jackson's papers "were originally given at meetings of medical organizations" [1] of which there were many in late nineteenth-century London.

These oral papers were then reported in the weekly medical press, sometimes two, three or even four versions appearing in the different journals, not only the *Lancet* and the *British Medical Journal* but also the *Medical Times and Gazette* and the *Medical Press and Circular*. This appears to be borne out for the case of treadler's cramp.

There are two substantial published bibliographies of Hughlings Jackson's work: the *Catalogue Raisonné of York & Steinberg* (2006) and Greenblatt's "Published writings of John Hughlings Jackson" (2022). Consulting these sources for the year 1891 [3,4], one finds that the case of treadler's cramp was reported in the *Lancet* and in *Brain* (York & Steinberg items [91-01] and [91-06]). The *Lancet* report (identical wording to that given above) related to a meeting which took place at the Medical Society of London on 16th February [5]. However, the original publication in the *Transactions of the Medical Society of London* appears in neither bibliography.

Why this oversight? Why did these distinguished authors not think to access the original presentation, rather than simply report thereof? One possible explanation might be that these authors were unaware of this relatively obscure journal, but more likely, I think, the journal may have been inaccessible rather than unknown to them. (I saw this journal on a pre-arranged visit to the Medical Society of London, although it is available through Internet Archive.)

What can one make of the actual case report? Irrespective of the well-recognised shortcomings of attempted retrospective diagnosis, I suspect that many neurologists will want to venture a diagnostic or differential diagnostic opinion, notwithstanding the paucity of clinical information (no examination!). My reading, for what it is worth, is that the 30-year history of repetitive flexion-extension movement might make compressive lumbosacral radiculopathies in the context of degenerative spinal disease the most likely diagnosis; this might also perhaps account for the "diminution of faradic and galvanic irritability" in the gluteal and hamstring muscles. However, the mention of spasm and of stiffness in the leg may perhaps suggest a more proximally located (i.e. central) disorder: is this a form of occupational or task-specific dystonia, *avant le nom*?

Luckily, as in any typical grand round presentation, further clinical information is available! Unlike the *Lancet* report, which is identical to the

*Transactions of the Medical Society of London* account, the *Brain* report is quite different. Indeed, it is related to a different meeting, that of the Neurological Society (of London) held on 5th March 1891, and Jackson's name does not appear on the by-line [6]. Now we are given details of the man's age (56) and initials (J.M.), and some examination findings: "The tendon jerks are equal and not exaggerated" and the right glutei and hamstring muscles are wasted compared to the left. Moreover:

the flexion of the limb when treadling is performed with great difficulty, as if some resistance were being overcome, the thigh becoming inverted during the process.

Could this resistance be involuntary co-contraction of agonist and antagonist muscles? Could the thigh inversion be dystonic posturing?

The spasm can be lessened by supporting the lower end of the thigh, and especially when any pressure is exerted on the popliteal space. ... whether in the present case the improvement is due to any pressure on the nerve I have not been able to determine, but am inclined to attribute it solely to support of the limb.

Could this be a sensory trick which relieves a dystonic posture?

The patient walks leaning forward and using the right leg very stiffly. He goes upstairs with difficulty; downstairs easily. That the gait should be affected is in accordance with ... [the] observation that, while in an occupation spasm, like writer's cramp, in which the movements concerned are fine, the affection is usually, though not invariably, limited to the act of writing; in those in which the movements are large ... the limb suffers for modes of action other than that of the occupation. Since both walking and going upstairs involve flexion of the limb similar to that which occurs in treadling, it might be expected that they would suffer in this case.

The comparison here with writer's cramp, another "occupation spasm", is of note, although the appearance of symptoms when walking as well as when treadling may be more in keeping with a task-specific dystonia. Rivers reported Hughlings Jackson's view of these cases as follows:

He considers that the affections known as occupation spasms are due to defective action of some elements of the spinal centres, or their homologues higher up.

Whatever the diagnosis in this patient may have been, the attempted formulation presented

here may illustrate how the clinical approach to cases changes over time, not merely in terms of investigations available but conceptually.

York & Steinberg stated that the "Dr. Rivers" by whom the case was presented on behalf of Hughlings Jackson, at both the Medical Society of London and the Neurological Society, was W.H.R. Rivers (1864-1922). Indeed, this is the name which appears on the by-line of the *Brain* paper [6]. Rivers is perhaps best known to posterity for his work with patients suffering from shell-shock during the First World War, but at this early stage in his career he was house physician at the National Hospital for the Paralysed and Epileptic at Queen Square (although mentioned only in passing in this capacity in Shorvon & Compston's history of the National [7]). It was apparently at this time that Rivers also met and became friends with another physician from the London Hospital, Henry Head, with whom he later (1903-1907) collaborated in a famous experiment on the consequences of nerve division, Head being the experimental subject [8].

#### **Acknowledgement**

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