Acta Neurochir (2011) 153:605
DOI 10.1007/s00701-011-0943-3

LETTER TO THE EDITOR

Francis Murphey's theory on lumbar disc disease: upon reflection

Andreas K. Demetriades · Christina K. Demetriades

Received: 9 December 2010 / Accepted: 5 January 2011 / Published online: 27 January 2011

The authors seek to prove that Francis Murphey's theory, as it relates to discogenic low back pain, amounts to weak inductive reasoning and does not justify discography and intra-discal procedures, which should therefore be abandoned [1].

However, even if Murphey's theory were in fact *strong* inductive reasoning, it would still not be, strictly speaking, conclusive in its argument. This is because:

The subjective nature of the human mind and of human experience necessarily restricts any evidence-based argument to inductive reasoning. Thorough research based on evidence and/or the trial-and-error approach has, in fact, on countless occasions, led to medical advancement. The findings of such research can at best be inter-subjective, i.e. it constitutes evidence pertaining to frequently occurring results, which can nevertheless not be absolutely exclusive; the possibility of the occurrence of a result indicating the contrary conclusion still exists, however remote. This practice is not deplorable—to the contrary, in fact, the biggest portion of human practice, in domains such as medicine, the social sciences, economics and politics, can only rely on this type of approach for further development and progress. It remains that for progress and development in any human field, there is a pool of inter-subjective findings which rationally forms a base for theory and/or practice.

A. K. Demetriades (✉) · C. K. Demetriades
Department of Neurosurgery, King's College Hospital,
Denmark Hill,
London SE5 9RS, UK
e-mail: andreas.demetriades@gmail.com

A. K. Demetriades
Society of Apothecaries Lecturer in the History and Philosophy of Medicine, Guy's, King's and St. Thomas' School of Medicine,
King's College,
London, UK

The authors are right to suggest that Murphey's theory falls within the spectrum of inductive reasoning—as does medical research in general. Even if Murphey's theory were proven to amount to *weak* inductive reasoning, it still would not prove that his theory is *wrong*: that is to say, even if he did not present tables with data inductively proving his theory, that would not prove that he did not have them or that were he to conduct hundreds of experiments, they would not yield the same results.

This is because induction–even strong induction–always leaves room for doubt. It is not objectively deduced; it is subjectively induced, hence fallible. Exploring the counter-arguments to this falls outside the scope of this letter, but it is worth noting that, in circles of philosophy of science, there are arguments that even "solid sciences"–like physics and pure mathematics–are not absolutely and objectively reliable, the chaos theory being one example. [2]

The real question should not be whether Murphey's theory is a syllogism rendered weak by lack of factual evidence, but whether it is, in fact, independently of Murphey, wise to continue to follow the practice which did emerge from his theory, or not, and why.

Conflicts of interest None.

References

1. Alemo S, Sayadipour A (2010) Sources and patterns of pain in lumbar disc disease; revisiting Francis Murphey's theory. Acta Neurochir Wien 152(9):1555–1558
2. Hilborn RC (2004) Sea gulls, butterflies, and grasshoppers: a brief history of the butterfly effect in nonlinear dynamics. Am J Phys 72:425–427