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# Creutzfeldt-Jakob disease: Cases of nomenclatural misrepresentation due to ‘tortured phrases’

## Dear Editor,

Creutzfeldt-Jakob disease (CJD) is a fatal neurodegenerative disease that impacts prions and expresses itself through dementia [1]. Possibly due to the use of reverse translation or the synonymization of terms, odd non-standard terms or ‘tortured phrases’ [2] might appear in CJD (and other medical) literature, diluting the effectiveness of medical jargon [3]. ‘Tortured phrases’ were previously noted for Alzheimer’s disease [4] and Parkinson’s disease [5].

Using similar cues used previously to detect ‘tortured phrases’ for Parkinson’s disease [5], a search was conducted at Google Scholar on 12 August 2024, for four ‘tortured phrases’ that supposedly represent CJD, namely “Creutzfeldt-Jakob ailment” (CJA), “Creutzfeldt-Jakob infection” (CJI), “Creutzfeldt-Jakob malady” (CJM), and “Creutzfeldt-Jakob sickness” (CJS), including any document with a DOI, or original research or reviews that were open access (green cells in Suppl. Table). Some documents that were open access, despite not having a DOI, were also included. Non-English texts and theses were excluded, while the two documents’ full texts could not be obtained or analyzed.

There were 2, 13, 3, and 8 entries for CJA, CJI, CJM, and CJS, respectively, representing 13 unique documents (Suppl. Table), and mostly in review papers (14/23, or 61% of documents). In other words, the most common ‘tortured phrase’ for CJD was

“Creutzfeldt-Jakob infection”. None of the documents has been retracted, and the most highly cited paper carrying CJI was published in 2010 (DOI: 10.1210/jc.2009-0178). One paper, a 2018 review (DOI: 10.20959/wjpr20192-14238), carried all four ‘tortured phrases’. In some documents, the authors referred to CJD correctly, as CJD, but had one or more instances of the ‘tortured phrases’.

Evidently, in some instances, particularly in indexed papers published even before the advent of reverse translation software and advanced AI-driven online tools, the replacement of standard CJD with lesser-known or non-standard terms would likely have occurred out of error. Similarly, it is conceivable that some instances might refer to the infection of the agent that causes the disease (e.g., DOI: 10.1093/milmed/168.3.261), and not necessarily a replacement of CJD with a ‘tortured phrase’.

Some of the documents were published in journals, or by publishers, of questionable scientific quality, and the greater risk in those cases is that erroneous terms can be propagated to other literature through citation.

## Article information

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