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CK – What does it stand for?



In a recent edition of the American Journal of Emergency Medicine, Chan et al. describe two cases of weakness and elevated “creatinine kinase” (sic) as the initial presentation of coronavirus disease 2019 (COVID-19) [1]. The reference to “creatinine kinase” in the article title is repeated in the keywords and abstract, although in the main text the enzyme is simply referred to as “CK”.

Rather than creatinine kinase, presumably the authors were instead referring to the enzyme creatine kinase. Creatine kinase catalyses the phosphorylation of creatine to phosphocreatine, is frequently measured as a marker of muscle damage, and is commonly abbreviated as “CK” [2]. Creatinine is neither a product nor substrate for creatine kinase, and is instead formed from creatine and phosphocreatine via non-enzymatic reactions.

It is likely that most readers understood the authors as they intended, and did not erroneously conclude that a novel “creatinine kinase” assay is a potential marker of COVID-19 infection. The authors claim that these are the first two reported cases of COVID-19 presenting initially as an isolated muscle weakness with increased CK. The spelling error does raise doubts as to whether, in reaching that conclusion, the authors used the correct terminology for creatine kinase in their literature search.

The mistake of referring to creatine kinase as creatinine kinase is common in the medical literature [3–6]. A plea for precision in the naming of this enzyme was published in 2003 [7]; it is time to echo this plea in order to stop the spread of the creatine kinase misspelling epidemic.

References

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