Corrections to "Identification of the General Anesthesia Induced Loss of Consciousness by Cross Fuzzy Entropy-Based Brain Network"

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IN THE above article [1], to track the loss of consciousness (LOC) induced by general anesthesia (GA), we first developed the multi-channel cross fuzzy entropy method to construct the time-varying networks, whose temporal fluctuations were then explored and quantitatively evaluated. Since time-varying network topologies were found to fluctuate from long-range frontal-occipital to short-range prefrontal-frontal connectivity during the LOC period, a new parameter, i.e., the long-range connectivity (LRC) that measured the number of frontal-occipital connectivity, was accordingly calculated and then investigated between the coherence (COH) and cross fuzzy entropy (C-FuzzyEn) approaches, as displayed in Fig. 1. The distinct time-varying fluctuations of both approaches were indeed found within this period, where only C-FuzzyEn effectively captured the consciousness fluctuation induced by the GA.

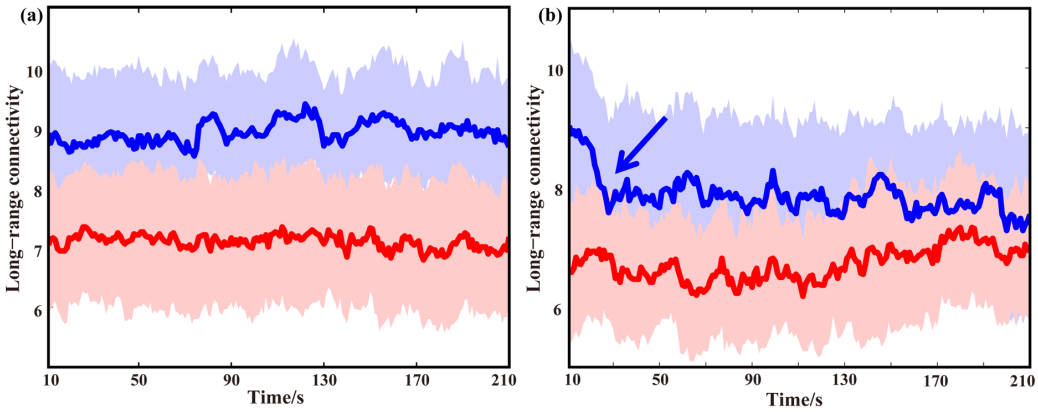

Fig. 1. The time-varying LRC parameter corresponding to the C-FuzzyEn and COH approaches during the resting (a) and LOC (b) period. The red and blue solid lines denote the mean number of the long-range frontal-occipital connectivity of COH and C-FuzzyEn, respectively, the pink and light blue shadows denote the corresponding standard deviation of COH and C-FuzzyEn, respectively.

Recently, the time-varying LRC figure of the LOC, i.e., Fig. 4(b) of the original article, was found to be cursorily printed as a diagram of time-varying network properties (i.e., clustering coefficient); therefore, we corrected this mistake by reprinting this figure, as shown in Fig. 1(b).

REFERENCES

[1] F. Li *et al.*, "Identification of the general anesthesia induced loss of consciousness by cross fuzzy entropy-based brain network," *IEEE Trans. Neural Syst. Rehabil. Eng.*, vol. 29, pp. 2281–2291, 2021.

Manuscript received 17 August 2022; revised 5 September 2022; accepted 6 September 2022. Date of current version 17 January 2023. *(Fali Li, Yuqin Li, and Hui Zheng contributed equally to this work.) (Corresponding authors: Tao Xu; Ti-fei Yuan; Peng Xu.)*

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Digital Object Identifier 10.1109/TNSRE.2022.3205527