Clinical commentary

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Stimulation-induced ictal vocalisation of left frontal lobe origin

Leyla Baysal-Kirac [1,2], Elisabeth Hartl [1,3], Christian Vollmar [1], Katharina Ernst [1], Hannah Lohr [1], Soheyl Noachtar [1]

[1] Epilepsy Center, Department of Neurology, University of Munich, Munich, Germany
[2] Department of Neurology, Okmeydani Training and Research Hospital, Sisli, Istanbul, Turkey
[3] Psychiatry Neuroimaging Laboratory, Department of Psychiatry, Brigham and Women's Hospital, Harvard Medical School, Boston, USA

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- Pure ictal vocalizations are defined as an audible non-speech sound, not accompanied by apnoea or generalized tonic-clonic or clonic seizures.

- Stimulation of electrodes in the left superior frontal gyrus elicited a similar vocalisation as that in the habitual seizures of our FLE patient.

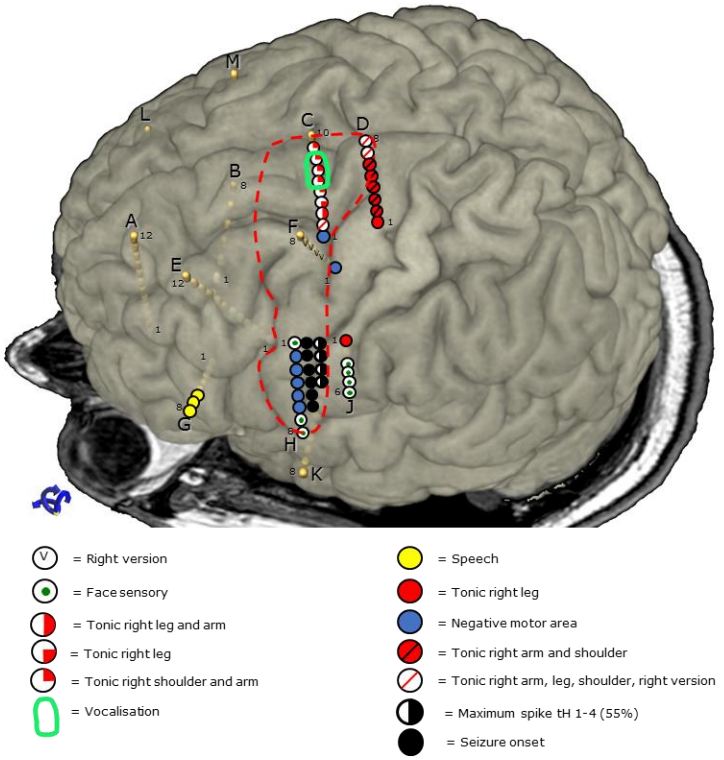

Figure 1

- Quantitative analysis of the audio signal shows the similarity of the vocalisations in these two patients.

- The audio analysis demonstrates that the ictal vocalization of Patient 2 shows the same pattern of reduced frequency variations as the stimulation induced vocalization of Patient 1.

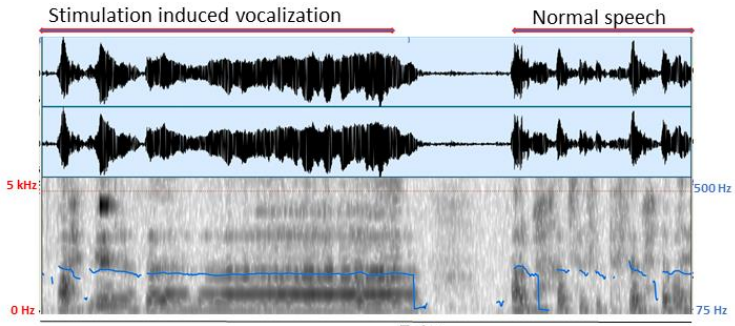

Figure 2a

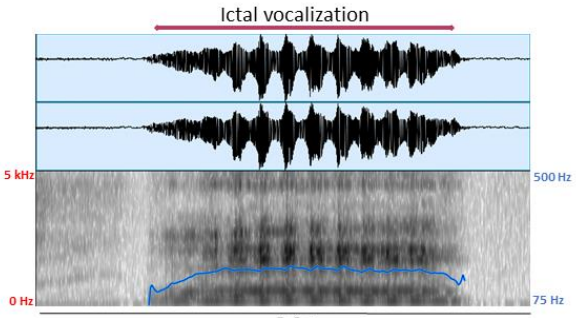

Figure 2b

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- We conclude that continuous monotonous prolongation of a vowel as the sole manifestation of an epileptic seizure can originate from the left superior frontal gyrus.

- This phenomenon should be further evaluated with quantitative audio analyses as this may be potentially useful for presurgical evaluation of epilepsy patients.