■ Multimedia teaching material

Epileptic Disord 2022; 24 (1): 219-220

Epileptic Disorders

Let's all repeat – palilalia may be epileptic!

Fábio A. Nascimento[1], Jay R. Gavvala[2]

[1] Department of Neurology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA
[2] Department of Neurology, Baylor College of Medicine, Houston, TX, USA

Received June 5, 2021; Accepted August 27, 2021

We report a 42-year-old right-handed man with drug-resistant focal epilepsy due to viral encephalitis who was referred to our center for new-onset spells characterized by rapid breathing and repetition of syllables. On video-scalp EEG evaluation (*video sequence 1*), these spells of hyperventilation and palilalia were captured with EEG correlate of a bilateral temporal seizure. Subsequent stereo-EEG evaluation showed independent left and right hippocampal seizures; hyperventilation and palilalia were seen upon right frontal lobe recruitment (*video sequence 2*). Palilalia consists of a speech perseveration wherein patients compulsively repeat syllables, words, or phrases. It has been associated with multiple psychiatric and neurologic disorders including stroke, degenerative disorders, tic syndromes, and – rarely – epilepsy [1, 2]. Epileptic palilalia seems to be a manifestation of frontal involvement [2, 3] either primarily or secondarily due to spread from hippocampal seizures from either hemisphere. Additionally, echolalia-palilalia has also been associated with non-convulsive status epilepticus for which the EEG shows generalized discharges with occasional left frontal predominance [4]. ■

Supplementary material.
Summary slides accompanying the manuscript are available at www.epilepticdisorders.com.

Disclosures.
F. Nascimento is a member of the Epileptic Disorders Editorial Board. J. Gavvala reports no disclosures relevant to the manuscript.

References

1. Benke T, Butterworth B. Palilalia and repetitive speech: two case studies. *Brain Lang* 2001; 78(1): 62-81.

2. Landi D, Benvenga A, Quattrochi CC, Vollero L, Assenza G, Pellegrino G, *et al*. Complex epileptic palilalia: a case report. *Seizure* 2012; 21(8): 655-7.

3. Cho YJ, Han SD, Song SK, Lee BI, Heo K. Palilalia, echolalia, and echopraxia-palipraxia as ictal manifestations in a patient with left frontal lobe epilepsy. *Epilepsia* 2009; 50(6): 1616-9.

4. Linetsky E, Planer D, Ben-Hur T. Echolalia-palilalia as the sole manifestation of nonconvulsive status epilepticus. *Neurology* 2000; 55(5): 733-4.

VIDEOS ONLINE

• **Correspondence:**
Fábio Augusto Nascimento e Silva
55 Fruit St., Wang 7th floor,
Boston, MA, 02114, USA
<nascimento.fabio.a@gmail.com>
<fnascimento@mgh.harvard.edu>

Legends for video sequences

Video sequence 1

Video-scalp EEG shows one electroclinical seizure featuring palilalia (sensitivity: 7 uV/mm, LF: 1 Hz, HFF: 70 Hz, notch off). There was a behavioral change (blue star) before he started hyperventilating and experiencing palilalia (red star). He was able to follow a simple command during the seizure. Electroencephalographically, there was rhythmic 4-6 Hz, sharply contoured activity in the bitemporal chains (red arrows) followed by evolution in morphology, amplitude, and location.

doi:10.1684/epd.2021.1383

Video sequence 2

Video-stereo-EEG shows one electroclinical seizure featuring palilalia (sensitivity: 75 uV/mm, LF: 0.53 Hz, HFF: 300 Hz, notch off). RH: right hippocampal contacts; RF: right frontal contacts; LH: left hippocampus contacts. During the left hippocampal electroclinical seizure, there was hyperventilation (blue star) followed by palilalia (yellow star). Electroencephalographically, there was ictal onset at the left hippocampus (LH; red arrow) with subsequent spread to the right hippocampus (RH; blue arrow) and then right frontal region (RF; pink arrow).

Key words for video research on www.epilepticdisorders.com

Phenomenology: hyperventilation, language impairment
Localization: temporal lobe (bilateral)
Syndrome: focal non-idiopathic mesiotemporal
Aetiology: encephalitis

TEST YOURSELF

(1) Palilalia consists of a speech perseveration wherein patients compulsively repeat syllables, words, or phrases.
A. True
B. False

(2) Palilalia may be a manifestation of:
A. Epileptic seizures
B. Tic syndromes
C. Stroke
D. Neurodegenerative disorders
E. All the above

Note: Reading the manuscript provides an answer to all questions. Correct answers may be accessed on the website, www.epilepticdisorders.com.