Reviewer's report

Title: Monoaural Musical Hallucinations caused by a Thalamocortical Auditory Radiation Lacunar Infarct

Version: 2  Date: 20 September 2014

Reviewer: Ahmed Rabie

Which of the following best describes what type of case report this is?: New associations or variations in disease processes

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: No

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Is the anonymity of the patient protected?: Yes

Comments to authors:

This paper reports a rare and presentation of a lacunar infarct at the vicinity of the basal ganglion, namely at the thalamocortical auditory radiation. This type of infarcts and small hemorrhagic strokes, have always been of great value to neuroscientists. They helped in identifying the functions of many cortical centers and subcortical nuclei, as well as the white matter connections between different areas of the brain and the spinal cord, as the limbic system, the arcuate fasiculus, pyramidal tract, and different connections in the basal ganglion, brain stem and cerebellum. They also helped in identifying the brain areas incriminated in the pathogenesis of different neurological and psychological disorders as Parkinsonism, tremors, dystonia, ataxia, and many others. These CVS strokes also helped in development of many neurosurgical procedures to treat different neurological disorders as thalamotomy, pallidotomy, anterior capsuloyomy,
cingolotomy, and Deep brain stimulation of different brain targets to treat Parkinson’s disease, tremors, dystonia, tourette’s syndrome, OCD, major depression, epilepsy, pain, and other disorders.

In this report, the authors present an elderly patient with past history TIAs and bilateral hearing impairment due to bilateral hypacusis. The patient recently developed left unilateral musical hallucinations after right sublenticular lacunar infarct of the thalamocortical auditory radiation. The patient did not show any other psychological manifestations, and complex partial seizure was excluded by EEG and the absence of disturbance of consciousness.

We agree to the conclusion that this case supports the hypothesis that a combination of peripheral and central deafferentiation causes organic musical hallucinosis, although this conclusion requires further studies to confirm it. We also agree to the recommendation that all patients with monoaural musical hallucinations should have brain imaging to rule out a central organic cause regardless of the presence of hearing impairment, although it is already the mean stream practice to do brain imaging for any patient with recent onset neurological or psychological symptoms, especially lateralizing symptoms.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Declaration of competing interests:**

I declare that I have no competing interests