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Sample Article: Neurology

Citation:

Author: Elias WJ, Lipsman N, Ondo WG, et al.

Title: [A randomized trial of focused ultrasound thalamotomy for essential tremor](#)

Journal: New England Journal of Medicine

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Questions:

- 1) According to the article, which of the following was the most common adverse event that occurred in subjects treated with focused ultrasound thalamotomy?
 - a. Gait disturbance
 - b. Sensory disturbances**
 - c. Ataxia
 - d. Cerebral hemorrhage
 - e. Meningoencephalitis

Key: B

- 2) According to the article, which of the following is a significant limitation of this study?
 - a. Lack of sham surgery in the control group
 - b. Prospective gathering of data
 - c. Procedures were only performed unilaterally**
 - d. Relatively short duration of follow-up for treated patients
 - e. Inability to successfully deliver focused ultrasound to a majority of subjects

Key: C

- 3) According to the article, focused ultrasound thalamotomy was found to lead to significant improvement in which of the following measures?
 - a. Ipsilateral hand tremor at 3 months
 - b. Head and axial tremor at 3 months
 - c. Ipsilateral hand tremor at 3 weeks

d. Contralateral hand tremor at 3 months

e. Contralateral hand tremor at 3 weeks

Key: D

4) A 55-year-old otherwise healthy man presents to the clinic for evaluation of action tremor of both hands. It has been present for two years and has progressively worsened. It is affecting his ability to carry out day-to-day tasks and is negatively impacting his quality of life. He is diagnosed with essential tremor and requests treatment. According to the article, which of the following is the most appropriate initial treatment strategy for this patient?

a. Unilateral focused thalamotomy

b. Trial of propranolol

c. Deep brain stimulation (DBS)

d. Trial of botulinum toxin injections

e. Trial of topiramate

Key: B

5) A 78-year-old man with a 15-year history of moderate-to-severe essential tremor that has been unsuccessfully treated with primidone and propranolol presents for further evaluation. In addition to essential tremor, he has a four-year history of Alzheimer disease; his Mini Mental State Examination (MMSE) score is 21. He is otherwise healthy, without major medical problems including cardiac disease. His wife reports that his tremor is negatively affecting his ability to carry out activities of daily living and her ability to care for him. She recently heard about unilateral focused thalamotomy as a possible treatment for essential tremor. According to the article, based on the exclusion criteria used in this study, what should the patient and his wife be cautioned about regarding this treatment option?

a. This procedure is a not good treatment option in his case because of the severity of his tremor.

b. The absence of a history of cardiac disease makes him a poor candidate for this procedure.

c. His age precludes this procedure as a treatment option.

d. His history of Alzheimer disease and low cognitive function based on his MMSE score may make him a poor candidate for this procedure.

e. He would need to first fail treatment with deep brain stimulation (DBS) prior to treatment with unilateral focused thalamotomy.

Key: D