



American Board of Psychiatry and Neurology, Inc.

A Member Board of the American Board of Medical Specialties (ABMS)

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

Edition: 2016; 375: 730-9

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



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Sample Article: Child Neurology

Citation:

Author: Bakian AV, Bilder DA, Korgenski EK, Bonkowsky JL.

Title: [Autism spectrum disorder and neonatal serum magnesium levels in preterm infants.](#)

Journal: Child Neurology Open

Edition: 2018; 5: 1-7

Questions:

- 1) Which of the following infants born at an Intermountain Healthcare facility in Utah between 2002 and 2010 would not have been eligible for inclusion in the study described in this paper?
 - a. A girl born at 26 weeks' gestation who required intubation and treatment with surfactant and antibiotics.
 - b. A boy born at 30 weeks' gestation who was fed by gavage for two weeks because he was not a vigorous oral feeder.
 - c. A girl born at 35 weeks' gestation to a mother whose medical record indicated she was enrolled in a methadone maintenance program during the pregnancy.
 - d. A boy born at 36 weeks' gestation with tetralogy of Fallot, successfully palliated surgically at 15 months postnatal age.**
 - e. Twin girls born at 30 weeks' gestation with birthweights of 1300 and 1450 grams, respectively, to a mother who has a twin brother.

Key: D

- 2) Some children included in this study were identified as having autism spectrum disorder by which of the following reporters?
 - a. Biological mothers
 - b. Obstetricians of record
 - c. Study investigators
 - d. Qualified medical providers**
 - e. Neuropsychological testers

Key: D

- 3) A pregnant woman in labor is brought to the emergency department. She is carrying a boy who is 28 weeks along. Her first child is a four-year-old boy who has autism spectrum disorder. According to this paper, which of the following is the most appropriate counsel to provide the mother?
- a. If your baby is born now, he will have autism spectrum disorder like his brother.
 - b. Magnesium may prevent cerebral palsy in premature infants, but it doesn't prevent autism spectrum disorder.**
 - c. Magnesium should be given to prevent your baby, likely to be born premature, from having autism spectrum disorder.
 - d. Your serum magnesium levels will tell us how likely it is that your baby will have autism spectrum disorder.
 - e. Intravenous magnesium will be given to your baby when he is born to protect his brain from injury.

Key: B

- 4) According to this paper, which of the following groups of characteristics were factors that influenced the likelihood of newborns in this study going on to be diagnosed with autism spectrum disorder?
- a. Race, ethnicity, size for gestational age
 - b. Mother's health insurance carrier, fasting blood glucose, income
 - c. Birthweight, 5-minute Apgar score, gender**
 - d. Day 1 of life serum magnesium, maternal serum magnesium, 1-minute Apgar score
 - e. Chromosomal configuration, heart anatomy, presence of hydrocephalus

Key: C

- 5) A medical student asks which neurotransmitter pathway might be affected to produce the neuroprotective effects of magnesium. The best response would be which of the following neurotransmitters?
- a. Glutamate**
 - b. Gamma-amino-butyric acid (GABA)
 - c. Norepinephrine
 - d. Dopamine
 - e. Acetylcholine

Key: A