

CME in Neurology – Self-assessment questions

(Single best response)

Answers

Question 1

Answer (b)

Cognitive impairment is common in elderly patients, hence ASMs with cognitive adverse effects (i.e.: topiramate) are not optimal choices. Valproate may be associated with a higher risk of cognitive problems and parkinsonism in the elderly. Osteoporosis is a co-morbidity in the elderly and enzyme-inducing ASMs, as well as valproate increase the rate of bone loss, leading to increased risk of fractures. Enzyme inducers (phenytoin, carbamazepine) and inhibitors (valproate) interact with other medications which are metabolized by the cytochrome p-450 system. Thus, lamotrigine is the best choice from the list given.

Question 2

Answer (a)

Post-stroke epilepsy refers to seizures that occur after a stroke. Older adults who have experienced a stroke are at a higher risk of developing epilepsy compared to the general population. According to most studies, a late seizure (>1 week after stroke) in stroke survivors is associated with a high risk (>70%) of seizure recurrence. Thus, a single, unprovoked, late seizure results in diagnosis of post-stroke epilepsy according to the current epilepsy definition established by the International League Against Epilepsy which set a threshold of >60% recurrence risk within 10 years. Therefore, ASMs can be initiated without further delay.

Question 3

Answer (e)

This patient should be prescribed a triptan as abortive treatment at the onset of migraine. This could be combined with a NSAID aimed at decreasing neurogenic sterile inflammation. With longer waiting time, acute treatments of migraine become less effective in reversing the entire complex of symptoms. If she still had a severe headache, dihydroergotamine (DHE) infusion is an option, although not available in Sri Lanka.

As her headaches are severe, debilitating, occurring up to 6 days per month, and interfering with her job, she should also be prescribed a preventative agent. She is overweight, so topiramate would be a reasonable choice because weight loss is a side effect of this medication.

Question 4

Answer (d)

Topiramate would be the best option and is the least contraindicated in this patient. The side effects of possible weight loss and appetite suppression of topiramate would be beneficial for her. Other side effects to be aware of when using topiramate include paraesthesia in the digits, cognitive slowing, word-finding difficulty, nephrolithiasis and, rarely, acute angle closure glaucoma. The side effects of the remaining medications make them less desirable. Amitriptyline could cause weight gain in an already overweight patient. Propranolol and other β -blockers are contraindicated in patients with asthma and can also cause weight gain and reduced exercise tolerance. Verapamil could worsen her constipation. Sumatriptan is used as an acute treatment of migraine and not as preventive therapy.

Question 5

Answer (c)

CNS infections should be considered as the first differential in a patient presenting with acute onset seizures, headache and fever. Although early AIE such as anti NMDAR encephalitis is also a possibility, exclusion or treatment of infections early is vital.

Young female in with psychiatric manifestations and possible orofacial dyskinesia is likely to have NMDAR encephalitis. Case in response "b" favours AIE/ limbic encephalitis related to lung cancer. Middle aged woman with new onset sleep disorders and neuropsychiatric manifestations in response "d" is likely to have anti IGLON 5 or limbic encephalitis like LGI 1. Patient in response "e" has features of PERM.

Question 6

Answer (c)

Lumbar puncture is necessary to exclude an infection before starting treatment with immunotherapy. EEG will be supportive of the diagnosis but not mandatory before starting treatment. Brain MRI is also helpful but does not need to be done urgently.

Question 7

Answer (d)

Occasionally, AIE can predate malignancies. Therefore, screening at regular intervals for 3-5 years is necessary in AIEs that can be associated with malignancies. On the other hand, PET is not sensitive for mature cystic teratomas, as these tumors have no or less FDG uptake. CT/ MRI is more sensitive in detecting teratomas.