

Medical Quiz: SBA – Answers

Question No. 1: Correct Answer – A

SLE is a multisystem, inflammatory disorder which is nine times more common in women than men and peak age of onset is usually 20–40 years of age. SLE has an extremely variable presentation, with clinical features usually caused by underlying vasculitis. These include polyarthritis (the most common clinical feature, often a symmetrical small joint polyarthritis similar to that seen in early RA), photosensitive rashes, mouth ulcers, serositis (affecting pleura or pericardium) or renal disease (usually nephrotic syndrome of renal failure due to underlying glomerulonephritis). The features presented in this case are, therefore, most suggestive of SLE as the diagnosis. The raised ESR and normal CRP should also identify SLE as the correct answer. Systemic sclerosis can be localized or diffuse and does not characteristically cause mouth ulcers, pleural effusions or a raised ESR. Sjögren's is a syndrome of dry eyes and dry mouth. It can be a primary syndrome or occur secondary to other autoimmune diseases. While it is associated with arthralgia, the pleural effusion, mouth ulcers and blood results make this diagnosis unlikely. Discoid lupus is a variant of SLE where skin involvement is the only feature. Bechet's disease usually manifests with oral ulceration and both ESR and CRP may be elevated.

Question No. 2: Correct Answer - B

Chronic myeloid leukemia occurs due to the reciprocal translocation of chromosome 9 (Abl) and 22 (BCR) causing the BCR/ABL fusion gene, otherwise termed the Philadelphia chromosome, which has uncontrolled tyrosine kinase activity. Treatment begins with imatinib, a tyrosine

kinase inhibitor which blocks the activity of BCR/ABL. Over time, the action of multiple drug resistance proteins which pump out imatinib and a change in the shape of the active site of BCR/ABL cause resistance. Dasatinib and eventually stem cell transplantation are then required for treatment. Hydroxycarbamide is a chemotherapy drug used primarily in the treatment of polycythemia rubra vera alongside venesection to reduce viscosity and hematocrit.

Question No. 3: Correct Answer - B

This man most likely experienced an episode of orthostatic or postural hypotension where syncope occurs as a result of reduced cerebral perfusion as the patient moves from lying to standing. Symptoms are similar to vasovagal in that the patient may become pale and describe 'the lights or sound dimming'. Perfusion is restored after the patient collapses and unconsciousness lasts no more than seconds or a couple of minutes with full recovery. However, vasovagal episodes can be brought on by sleep or food deprivation, hot or emotional environments, Valsalva manoeuvre (such as straining) and are not as closely related to position.

Syncope while lying down is more suggestive of cardiac syncope or seizure activity. It is important to rule out cardiac causes of syncope which may be heralded by chest pain or palpitations. Arrhythmias or aortic stenosis may be the underlying cause. TIAs are a very rare cause of

syncope. Seizures may be triggered by lack of sleep. They may be heralded by an aura, typically visual or olfactory. There may be urinary incontinence, tonic-clonic movements, tongue-biting and cyanosis during the event. However, jerky movements may occur in syncope of any cause.

This alone does not equate to a seizure.

Question No. 4: Correct Answer - C

Carcinoid tumors arise from enterochromaffin cells (APUD cells). They most commonly occur in the appendix, ileum or rectum but can occur elsewhere, including other areas of the gastrointestinal tract, ovary, testis or lung. It is often difficult to histologically determine whether carcinoid tumors are benign or malignant. Carcinoid tumors of the gastrointestinal tract are usually asymptomatic but may cause appendicitis, intussusception or obstruction. Carcinoid syndrome refers to carcinoid tumors with liver metastases. These patients are usually symptomatic and may present with spontaneous facial flushing, abdominal pain and watery diarrhea. Fifty per cent of patients develop cardiac

abnormalities, such as tricuspid regurgitation or pulmonary stenosis. Symptoms are produced by the tumors secreting substances such as 5-hydroxytryptamine, bradykinin and histamine. Investigations for carcinoid syndrome should include radiological imaging of the liver metastases and 24-hour urine 5-hydroxyindoleacetic acid. While facial flushing may be seen in superior vena cava obstruction, the other features are not seen, making this an unlikely diagnosis. Pheochromocytoma's are catecholamine-producing tumors, usually of the adrenal medulla. Patients present with features of catecholamine overload such as uncontrolled, episodic hypertension. Conn's syndrome are aldosterone producing adenomas which may present with features of hypokalemia, polyuria or polydipsia.

Question No. 5: Correct Answer - E

The most common organism causing endocarditis is *Streptococcus viridans*, which is thought to account for 30–50 per cent of cases, infection commonly occurs following dental procedures. *Staphylococcus aureus* is a common cause of infective endocarditis and accounts for a greater

proportion of cases among intravenous drug users and those with prosthetic heart valves. *Staphylococcus epidermidis* can cause infective endocarditis and tends to cause a more indolent disease. *Actinobacillus* is a gram-negative bacteria that is a relatively rare cause of endocarditis. *Enterococcus faecalis* is fairly common cause of endocarditis but is less common than *Streptococcus viridans*. It is important to note that sometimes, no cause of endocarditis is found.