

# CME: Endocrinology (144121): self-assessment questionnaire

Edited by Uazman Alam and Tahseen A Chowdhury

DOI: 10.7861/clinmed.SAQ.23.2

## SAQs and answers are ONLINE for RCP fellows and collegiate members

### Format

Candidates are asked to choose the best answer from the five possible answers. This best of five format is used in many medical examinations; however, the questions are not intended to be representative of those used in the MRCP(UK) Part 1 or Part 2 Written Examinations.

### The answering process

- 1 Go to <https://cme.rcplondon.ac.uk>
- 2 Log on using your usual RCP username and password
- 3 Select the relevant CME question paper
- 4 Answer all 10 questions by selecting the best answer from the options provided
- 5 Once you have answered all the questions, click on Submit

### Registering your external CPD credits

Carrying out this activity allows you to claim two external CPD credits. These will be automatically transferred to your CPD diary, where you can review the activity and claim your points.

1. A 34-year-old woman who is pregnant at 13 weeks is currently on propylthiouracil therapy for Graves' disease. Latest bloods show TSH 1.21 mIU/l (0.2–3.0) and free T4 19.2 pmol/l (11.5–22.7). Full blood count and liver function tests were within the normal range. She is not able to take carbimazole due to an episode of agranulocytosis in the past.

#### *What is the most appropriate course of action?*

- (a) Refer her for radioactive iodine.
- (b) Refer her for a subtotal thyroidectomy.
- (c) Continue on propylthiouracil throughout the course of her pregnancy.
- (d) Try her on carbimazole therapy again.
- (e) Stop all treatment as her thyroid function tests were normal on propylthiouracil therapy.

2. A 31-year-old man was admitted with acute severe headache, double vision, dizziness and lethargy. He was normally fit and well. Examination showed heart rate 95 bpm, blood pressure 89/50 mmHg, oxygen saturation of 96% on air, respiratory rate of 22 breaths/minute and temperature 38°C. Neurological examination was normal. Computed tomography imaging of the brain demonstrated a 2.3 × 1.5 cm pituitary lesion with associated haemorrhage which was abutting the optic chiasm.

#### *What is the most important first step in his management?*

- (a) Check random cortisol.
  - (b) Formal evaluation of his visual fields.
  - (c) Intravenous antibiotics.
  - (d) Intravenous hydrocortisone.
  - (e) Urgent discussion with neurosurgeons.
3. A 35-year-old man with a history of asthma has required prednisolone 30 mg for the last month, along with two courses of antibiotics. These were stopped and he resumed work as an electrician. One month later he was admitted via A&E with a 2-day history of severe abdominal pain, nausea and vomiting. He had loss of appetite prior to this. He smoked 20 cigarettes a day. His mother had type-1 diabetes. On examination his blood pressure was 82/45 mmHg, heart rate 65 bpm and he was afebrile. His abdomen was soft, but tender on palpation with bowel sounds present. Results of blood tests show serum sodium 124 mmol/l (133–146), serum potassium 5.3 mmol/l (3.5–5.3), glucose 4.2 mmol/l (3.5–6) and white cell count  $3.5 \times 10^9/L$  (4–11).

#### *Which is the most likely diagnosis?*

- (a) Diabetic ketoacidosis.
  - (b) HIV.
  - (c) Addison's disease.
  - (d) Secondary adrenal insufficiency.
  - (e) Gastroenteritis.
4. A 30-year-old man presents to A&E with tiredness and dizziness. His dizziness is worse on standing and has been ongoing for a few months. He has a past history of epilepsy on lamotrigine and a history of previous

brain surgery several years ago with no further detail. On examination, blood pressure is 110/80 mmHg (lying down) and 80/50 mmHg (standing), heart rate 70 beats/minute, temperature 36.2°C, oxygen saturation 94% on air, and respiratory rate 18 breaths/min. Investigations show: haemoglobin 125 g/L (120–160), white cell count  $9.2 \times 10^9/L$  (4–11), platelets  $290 \times 10^9/L$  (140–450), C-reactive protein 10 mg/L (0–4), glucose 3.9 mmol/L (3.5–6), serum sodium 134 mmol/L (133–146), serum potassium 5.8 mmol/L (3.5–5.3), serum urea 7.2 mmol/L (2.5–7.8), serum creatinine 100  $\mu\text{mol/L}$  (45–84), thyroid stimulating hormone 0.4 mU/L (0.35–5.5), and free T4 5.0 mU/L (11.5–22.7).

**Which is the most likely diagnosis?**

- (a) Hypopituitarism.
  - (b) Hypothyroidism.
  - (c) Medication-related side effects.
  - (d) Primary adrenal insufficiency.
  - (e) Sepsis.
5. A 73-year-old woman presents with intermittent episodes of collapse, accelerated hypertension and palpitations (persistent sinus tachycardia on ECGs). She has significantly elevated plasma normetadrenaline and a right-sided adrenal mass, consistent with a pheochromocytoma, is found on adrenal CT imaging.

**Consideration of genetic screening for pheochromocytoma should be considered in which group of patients?**

- (a) All patients.
  - (b) Those with bilateral disease.
  - (c) Those with malignant disease.
  - (d) Those with metastatic disease.
  - (e) Those aged <50 years.
6. A 36-year-old woman gave birth 5 months ago. Routine thyroid function tests have revealed TSH <0.01 mIU/l (0.2–3.0) with a free T4 of 30 pmol/l (11.5–22.7).

**What is the most appropriate course of action?**

- (a) Start carbimazole therapy regardless of thyroid receptor antibody (TRAB) status.
  - (b) Check TRAB status and treat with carbimazole if positive. If not, repeat bloods in 4 weeks.
  - (c) Reassure her and discharge her back to primary care.
  - (d) Repeat thyroid function tests in 8 weeks.
  - (e) Advise her to stop breastfeeding and re-check her bloods in 8 weeks' time.
7. A 35-year-old woman was seen in the emergency department following a collapse at home. She had been vomiting for the last 24 hours, and had symptoms of lethargy and weight loss. She had no significant past medical history. She had recently returned from a visit to India. Blood tests show serum sodium 127 mmol/l (133–146), serum potassium 6.0 mmol/l (3.5–5.3), serum

urea 9.2 mmol/l (2.5–7.8), creatinine 129  $\mu\text{mol/l}$  (45–84), glucose 3.5 mmol/l (3.5–6.0). You arrange for a blood sample to be sent for cortisol.

**Which of the following is the most appropriate next step in managing this patient?**

- (a) Start variable rate insulin infusion.
  - (b) Start IV 0.9% saline and give a bolus of hydrocortisone IV.
  - (c) Start prednisolone 40 mg oral.
  - (d) Start fludrocortisone 100 mcg daily.
  - (e) Start IV 5% dextrose fluid replacement.
8. A 28-year-old woman who had a history of hypothyroidism is pregnant at 10 weeks. She was not on any treatment and her thyroid peroxidase antibody (TPO) status was unknown. Her last set of blood tests showed a TSH 9 mIU/l (0.2–3.0), and free T4 12.3 mU/l (11.5–22.7).
- What is the most appropriate course of action?**
- (a) Observe further for symptoms of hypothyroidism in the mother and baby.
  - (b) Perform a set of TPO antibody tests and reassess after the blood test.
  - (c) Repeat her thyroid function test in 8 weeks alongside the TPO antibodies and treat if TPO comes back positive.
  - (d) Treat her with levothyroxine therapy regardless of TPO status to aim for a TSH at the lower half of the trimester-specific range.
  - (e) Treat her with levothyroxine if she has a family history of thyroid disorders and if she comes back as having positive TPO antibody.
9. A 28-year-old woman presented with tiredness, weight loss and diarrhoea over the past few months. She looked tanned on examination. Her BMI was 19. Blood tests show serum sodium 131 mmol/L (133–146), serum potassium 5.9 mmol/L (3.5–5.3), TSH 8.5 U/L (0.2–3.0), glucose 7.1 mmol/l (3.5–6.0).

**Which of the following is the most likely diagnosis?**

- (a) Polyglandular syndrome type 1.
  - (b) Polyglandular syndrome type 2.
  - (c) Polyglandular syndrome type 3.
  - (d) Gastroenteritis.
  - (e) Diabetic ketoacidosis.
10. 55-year-old man with a medical history of uncontrolled hypertension (BP 160/98 mmHg) on three agents (ramipril, doxazosin and verapamil) presents with a serum potassium of 3.3 mmol/l (3.5–5.3).

**Which of the following is true for screening of primary hyperaldosteronism?**

- (a) An initial aldosterone:renin ratio (ARR) should be undertaken after treating hypokalaemia to ensure potassium is >3.5 mmol/l (at testing), withholding ramipril

- for 6 weeks while up-titrating doxazocin and verapamil to ensure blood pressure is adequately managed.
- (b) CT/MRI should be the initial test of choice as it will conclusively guide lateralisation.
  - (c) Adrenal venous sampling (AVS) is the screening test of choice.
  - (d) <sup>11</sup>C-metomidate PET/CT provides a definitive diagnosis.
  - (e) A saline suppression test can be undertaken without an initial ARR in people with uncontrolled hypertension.

## CME: Clinical oncology SAQ

Answers to the CME SAQ published in *Clinical Medicine* in January 2023

<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>	<b>Q9</b>	<b>Q10</b>
(d)	(d)	(b)	(c)	(e)	(b)	(c)	(b)	(a)	(e)