**1. Lead examiner** ……

**2. Co-examiner** ……

**Candidate No:**

**Total Mark:**

**SCENARIO**

**You are the consultant in charge of a regional base hospital ED. A rapid assessment nurse has organised investigations on a 17 year-old girl who was brought in by her parents with a 6-month history of weight loss. She is complaining of weakness and intermittent palpitations.**

**Vital signs at triage are BP 90/65, Pulse 60, $spO_2$ 99% on air, temp $36^3$ deg C. A 12-lead ECG was taken on arrival.**

**Question 1: Describe and interpret this ECG ( 1 ½ *minutes*)**

| Expected Response | Details & Comments | |
|---|---|---|
| Features | Sinus arrhythmia 60(50-75)/min, PR normal **MUST HAVE SYSTEM**<br>QRS normal, ?Prolonged QTc, ST depress. PROMPT: Could it be anything else?<br>Abnormal T wave morphology and/or U wave<br>Relevant negatives: no ectopics, no cause for palpitations in current graph | |
| Diagnosis<br><br>PROMPT: *Look at the anterior chest leads. Electrolyte abnormality?* | Hypokalaemia<br><br>Diffs:<br>- ?normal variant in teenager<br>- hypomagnesaemia | |
| Interpretation | May be due to vomiting, laxative use, large bowel enteropathy, diuretic abuse<br>Possible anorexia.<br>Minimum: **eating disorder, medication abuse** | |

**Question 2: Outline your history and examination of this patient. ( 1 ½ *minutes*)**

| Expected Response | Details & Comments | |
|---|---|---|
| Be mindful of privacy, caring approach to assessment | | |
| Hx | Details of events, **eating Hx** – esp for anorexia or bulimia, **weight hx** for loss or fluctuations, **vomiting or diarrhoea** , exercise history, menstrual history<br>**Drugs** causing low K – diuretics, steroids, bronchodilators, laxatives, drug & alcohol<br>Collaborative History from **family** Prompt: What sources of history?<br>**Psychological** history, Suicide risk assessment – often associated | |
| Ex | For signs of possible eating disorder: weight loss, body hair – down, teeth for enamel loss from vomiting, skin sores – poor healing with malnutrition (**one** to pass)<br>Look for evidence of self harm – often associated<br>**CVS** exam , signs autonomic instability, heart failure<br>**Neuro** exam to exclude focal features, look for esp hyporeflexic, gen weakness<br>Height, **Weight** and BMI **Must get weight unprompted** | |

**Question 3: Venous blood gases assay shows a serum $K^+$ level of 2.2. Her clinical assessment is consistent with anorexia nervosa and ventricular ectopics. DISCUSS the methods of potassium replacement. ( 1 ½ *minutes*)**

| Expected Response | Details & Comments | |
|---|---|---|
| **Considerations** | Likely chronic onset associated with anorexia<br>However, weakness and VEs warrant rapid K replacement to a level >3.0 mmol/L<br>Serum K a poor indicator of total body K, which is likely to be low in this pt<br>Compliance in 17yo girl with eating disorder will be an issue! | |
| Oral | PROS: Rapid absorption formulation (eg Chlorvescent) indicated<br>Avoids IV complications of rapid infusion and pain at IV site<br>May be more acceptable to patient, Can be given via NG tube<br>CONS: Unpleasant taste<br>DOSE: 40 mmol every 6 hours | |
| IV | PROS: Avoids compliance issues , Can be titrated to repeat VBG measurements<br>CONS: Pain and irritation at IV site if rapid and / or concentrated<br>Danger of rapid overdosing; nowadays only pre-mixed IV bags available<br>DOSE: max 40 mmol/hr (peripheral); needs cardiac monitoring | |

| | | |
|---|---|---|
| **Perspective** | Oral likely to be first choice, needs magnesium/other electrolytes as well<br>If true cardiac arrhythmias are present or extreme weakness this would be an indication for IV (add if giving fluids for dehydration) | |

**Question 4: Before you implement your management plan, she asks to get dressed and discharge herself. Outline your approach. (2 ½ minutes)**

| Expected Response | Details & Comments | |
|---|---|---|
| **Issues**<br><br>**PROMPT: What are the issues here?** | **Autonomy vs Duty of Care**<br>? Reasons for wanting to leave<br>Attempt to secure pt's **trust and confidence**<br>Address these reasons if possible<br>**Determine level of Competence**<br>Seek assistance: NOK, nursing<br>Empower pt with options<br>**Involuntary intervention only if indicated** and legally empowered | |
| Engagement | Remain calm/try and build rapport<br>Articulate reasons to stay | |
| Assess risk of self discharge | Balance against risks to future attitudes/compliance from restraint | |
| Reasons for intentions<br><br>Attempt to address these | Identify misunderstandings and reassure<br>Identify patient priorities<br>- Fear: of hospital, treatment; loss of control<br>- Pain<br>- Social: fear of stigma, specific reasons at home; school pressures | |
| Enlist help | Parents: awareness that this may cause conflict<br>Nursing staff: who often have strong rapport<br>GP | |
| Assess competency | Use parents as collateral history<br>Assess depression/suicide risk<br>Age at 17 does not make her incompetent<br>Use of psych services for background history or second opinion<br>Use of witnesses to discussion eg nurse | |
| Negotiate options | Outpatient oral potassium<br>Discuss with regional eating disorders unit | |
| Legal Considerations | Medico-legal indications for involuntary intervention: prob not justified in this case<br>Information for discharge at own risk form<br>Signature if still discharges herself | |
| If Discharged | Close follow up<br>GP, ancillary services such as social work, psychology<br>Eating disorders unit referral<br>Involve patient with follow up plans<br>Information to patient and parents, incl indications for return | |
| Confidentiality | Approach is to guide acceptance of referrals | |

**Comments: (if you fail the candidate, please state why)**

**If the candidate fails the exam overall, what <u>feedback</u> would you suggest CIC provide for this SCE?**

# SCENARIO

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