Questions for this month's clinical challenge are based on articles in this issue. The style and scope of questions is in keeping with the MCQ of the College Fellowship exam. The quiz is endorsed by the RACGP Quality Assurance and Continuing Professional Development Program and has been allocated 4 CPD points per issue. Answers to this clinical challenge will be published next month, and are available immediately following successful completion online at www.racgp.org.au/clinicalchallenge. Check clinical challenge online for this month's completion date. **Kath O'Connor**

SINGLE COMPLETION ITEMS

DIRECTIONS Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the most appropriate statement as your answer.

Case 1 – Nicole Burns

Nicole Burns, 15 years of age, presents with a groin rash. You diagnose intertrigo and prescribe an antifungal and cortisone cream. During the consultation you notice that she is significantly overweight.

Question 1

What is the best way to raise the issue of overweight:

A. discuss long term consequences of overweight such as diabetes and heart disease
B. discuss how weight issues may have contributed to her skin problem
C. it is not appropriate to raise this issue as it may induce an eating disorder
D. it is not appropriate to raise this issue as it is not what Nicole has presented for
E. it is not necessary to raise this issue, as Nicole will grow out of her 'puppy fat'.

Question 2

You raise the issue of overweight with Nicole and she is keen to talk further. You make another appointment and take a full history and examination. Regarding assessment of degree of overweight on examination, which of the following is true:

A. an 'eyeball' test is adequate
B. an adult BMI will give an accurate assessment
C. Nicole should be asked to undress in order for you to make an appropriate assessment
D. a waist measure may be helpful
E. the Tanner scale is useful for assessing the size of the oropharynx.

Question 3

Nicole has no family history of overweight. She avoids breakfast and consumes significant amounts of fast food and soft drink per day. She spends 2–4 hours per day on small screen use and does no vigorous exercise. She is in the 90th percentile of weight for her age. She has no facial hair or acne. She is of appropriate height for her age, has no dysmorphic features, and according to school records is of normal intelligence. Which of the following investigations do you order:

A. fasting glucose, lipid profile, thyroid and LFTs, SHBG and free androgen index
B. fasting glucose, lipid profile, thyroid and LFTs
C. fasting glucose, lipid profile, thyroid and LFTs, and 24 hour urinary free cortisol level
D. fasting glucose, lipid profile, thyroid and LFTs and genetic testing to rule out Prader Willi syndrome and Bardet Biedl syndrome
E. none as it will not change your management.

Question 4

What is the best management strategy:

A. referral to a commercial weight loss program
B. no evidence based guidelines for weight loss in adolescents are available so you have nothing to offer Nicole
C. behavioural interventions including dietary modification and increased physical activity
D. gastric banding.
E. a graduated exercise program including swimming and gym work.

Case 2 – Carmela De Luca

Carmela De Luca and her family have been patients at your clinic for many years. Carmela, now 15 years of age, presents requesting a prescription for the oral contraceptive pill (OCP) as she is contemplating having sex with her boyfriend.

Question 5

Carmela does not want her mother to know. What do you do:

A. explain that you are legally required to ask her mother's permission before prescribing Carmela the OCP
B. explain that if her mother asks you are required by the *Privacy Act 1998* to disclose any information about Carmela's medical care
C. suggest that at her age condom use is more appropriate
D. assess whether Carmela is mature enough to make this decision for herself
E. tell Carmela she should not have sex as she is under age.

Question 6

In order to determine whether Carmela is a 'mature minor' you are required to:

A. ask her to complete the written 'Gillick competency' test
B. counsel her about use and possible side effects of the OCP and make an assessment of her understanding and intelligence in this matter
C. ensure that she will talk to her mother after you have provided her with a prescription for the OCP
D. make sure she understands the importance of 'safe sex'
E. ask her to present to the local magistrates court for the judge to decide.

Question 7

You are satisfied that Carmela is a 'mature minor'. You prescribe the OCP, discuss safe sex and encourage her to talk to her parents about the matter. If she refuses, you are required to:

A. call her mother and tell her
B. give Carmela's mother details of the consultation only if she requests this under the *Privacy Act 1988*
C. assure Carmela that the information is confidential
D. contact the department of human services and report the incident
E. terminate the therapeutic relationship.

Question 8

Carmela asks whether she can get the cervical cancer vaccine while she is here or whether she will get it at school. You tell her that:

A. only girls aged 12–13 years will receive the vaccine in school but she can get the vaccine free through you, her GP
B. there is a catch up program for girls aged 13–18 years who will receive the vaccine in school over the next 2 years
C. only girls aged 12–13 years receive the vaccine free from the government, so she will have to pay
D. she does not need the vaccine if she practises safe sex

E. she does not require vaccination until the time of her first Pap test.

Case 3 – Craig McConnell

Craig McConnell, 15 years of age, presents with his mother. Craig is dressed in dirty oversized jeans, a hooded top and a cap, which he has pulled down over his eyes. His mother says she is worried he is 'on drugs' but says he will not talk to her. You try to engage Craig in conversation but he gives only single syllable answers.

Question 9

What strategy will be MOST useful to encourage a therapeutic relationship with Craig (engagement):

A. tell him that his mother must be present in any consultation as he is a minor
B. ask if he would like to see you on his own but explain that any information which comes out in the process should be passed on to his mother so she can best care for him
C. ask if he would like to see you on his own and explain that the consultation would be confidential
D. tell his mother to leave the room as she is more of a hindrance than a help
E. ask directly about drugs in front of his mother.

Question 10

Craig agrees to see you alone and makes an appointment for the following week. You explain this to his mother who agrees reluctantly. When you see Craig you use the HEADSS framework to assess what is going on for him. The framework is valuable because:

A. it starts with the most important aspect of the history, ie. heroin use
B. it starts with the least threatening areas and provides context
C. it avoids comorbid issues because these are irrelevant to the adolescent
D. it is a drug focused information tool
E. eating habits are discussed and this is vital to the wellbeing of adolescents.

Question 11

Craig explains that he finds home life unbearable. His parents are always fighting and he prefers to 'get off his head' than listen to them. He admits to smoking 'crystal' 2–3 times a day. When he is with friends he sometimes injects the drug. Occasionally he shares needles. He has a girlfriend who thinks he becomes aggressive at times. He thinks she is being oversensitive. He is falling behind at school but doesn't 'care'. He does not think his drug use is a problem. Which motivational 'stage' applies to Craig:

A. contemplation
B. maintenance
C. action
D. precontemplation
E. continuation.

Question 12

Craig agrees to see you regularly to discuss these issues. You suggest he has a blood test to rule out blood borne viruses and you give him information about a local needle exchange. He takes these details and says he will have the blood test and see you for the results, and he will attempt to use clean needles when he injects. This indicates that his motivational stage is actually:

A. contemplation and action oriented but only toward harm minimisation
B. contemplation and action oriented toward reducing drug use
C. contemplation and action oriented toward comorbid conditions
D. action oriented
E. contemplation.

Case 4 – Marcus Holland

Marcus Holland, 15 years of age, has cystic fibrosis (CF). He presents for follow up after a week of antibiotic treatment and intensive physio for an exacerbation of CF with Pseudomonas infection. Marcus attends the appointment alone. You are impressed at how well he understands his illness and its treatment.

Question 13

Which of the following is true regarding self management of chronic disease in adolescents:

A. 18 years is the age of legal maturity. The capacity for self management does not appear until this age
B. adolescents of normal intelligence are usually able to manage all aspects of their care by around 15 years of age
C. capacity for self management does not appear at any specific age. As adolescents mature they develop varying capabilities
D. an adult should always accompany patients under 18 years of age to medical appointments
E. self management of chronic disease is no longer recommended.

Question 14

Marcus feels much better and his sputum volume and colour has returned to normal. You consider screening him for health risk behaviours. Which of the following is true regarding participation of young people with chronic disease in health risk behaviours:

A. they are less likely to participate in health risk behaviours such as drug use or unsafe sexual activity
B. they are just as likely to participate in health risk behaviours such as drug use or unsafe sexual activity as other young people
C. they are more likely to participate in health risk behaviours such as drug use or unsafe sexual activity
D. they are more likely to participate in risky drug use but less likely to participate in unsafe sexual activity
E. they are more likely to participate in unsafe sexual activity but less likely to participate in risky drug use.

Question 15

Marcus consents to screening him for health risk behaviours. He agrees. You decide to use the HEADSS mnemonic. What does this stand for:

A. home, education/employment, activities, depression, sex and suicidality
B. hardship, esteem, anxiety, depression, sleep disturbance, suicidality
C. home, education/employment, anxiety, depression, sex and suicidality
D. home, experiences, activities, depression, sex and suicidality
E. home, education, assistance, direction, service, self fulfilment.

Question 16

You flag the need to take a sexual history by explaining that you routinely ask these types of questions to young patients and that they may be personal questions. He agrees. He admits to having consensual vaginal sex with his 14 year old girlfriend, Sally. You discuss the following:

A. you will need to report Marcus because both he and Sally are under age
B. the use of condoms and symptoms of STIs
C. the importance of Sally starting the OCP and coming in for a Pap test
D. the need for Marcus to have an baseline HIV test
E. the need for Marcus to be vaccinated against hepatitis C.

ANSWERS TO JULY CLINICAL CHALLENGE

Case 1 – Brendan O'Donnell

1. Answer B

IV adenosine is the treatment of choice for SVT after a trial of valsalva. DC cardioversion may be considered in the acute setting if there is evidence of haemodynamic compromise. Catheter ablation is a long term option but is not part of the acute management of SVT.

2. Answer D

Adenosine blocks the AV node and in patients with WPW the aberrant pathway may result in tachycardia. Adenosine 12 mg is highly effective in terminating SVT. It must be given with the patient on a cardiac monitor.

3. Answer A

The most important test is an ECG in sinus rhythm. An echocardiogram may also be performed. An exercise stress test or angiogram would be considered if the patient had coexisting coronary artery disease. Electrophysiological studies would be performed if catheter ablation is contemplated.

4. Answer A

Brendan must see a specialist as he is a pilot (high risk occupation). Self management techniques are not appropriate. Warfarin therapy is not necessary in this setting. DC cardioversion may be considered if he reverts to SVT but only on specialist recommendation.

Case 2 – Deborah Greenberg

5. Answer B

Deborah is at high risk because of her age and history of HT. You do not know the exact time of onset of AF and 'a few days' is long enough for clot formation (>48 hours). On reversion thromboembolic risk does not cease immediately.

6. Answer B

A rate of 90–100 requires rate control and a beta blocker is the treatment of choice. Not all patients respond to pharmacological treatment for rate control. Cardioversion is an option but is not necessary in all patients.

7. Answer C

Catheter ablation may result in persistent AF. It is effective and may be used in patients for whom medical therapy is contraindicated because of risk of hypotension and in patients with tachycardia induced cardiomyopathy.

8. Answer B

Cardioversion is not essential but is an option for patients in AF. It may be achieved with medication or DCR. One medical option is amiodarone but its serious potential complications must be considered. Catheter scarring the atrium is an alternative treatment and is certainly not first line. Drug treatment is better at maintaining sinus rhythm.

Case 3 – the unknown patient

9. Answer C

The appropriate initial management in this case is to give two gentle breaths and start CPR if there is no response.

10. Answer B

With a biphasic defibrillator it is appropriate to deliver a single shock of 200 J. CPR should continue.

11. Answer D

Adrenaline 1 mg IV should be given every 3 minutes. Other antiarrhythmic drugs can be considered if a trial DC cardioversion fails.

12. Answer D

Amiodarone is the first line antiarrhythmic drug in this setting.

Case 4 – Max Geld

13. Answer B

Pacemakers no longer require thoracotomy and are inserted via a small incision under the clavicle into the cephalic or subclavian vein and fed into the heart through the venous system.

14. Answer D

Pneumothorax, haematoma, infection and lead dislodgement are uncommon side effects of pacemaker insertion. An overnight stay is usually required. If indicated, pacemaker insertion may be performed at a public hospital and is covered by Medicare. The pacemaker device will be palpable in the chest wall after the procedure.

15. Answer E

A single chamber device is indicated for complete AV block.

16. Answer A

Max should not drive for 2 weeks. The device is programmed by technicians in hospital and checked at regular outpatient appointments. He should carry an ID card with information about the implant device and leads at all times. MRI scanning is contraindicated. Mobile phones can potentially cause problems but are generally considered okay if they are kept 15 cm from the device; microwave ovens are safe.

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