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.

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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 – Peter Ponderal

Still feeling seedy from his 40th birthday party the weekend before, Peter Ponderal has come to see you for the first time. He gamely admits that he hasn't seen a doctor for many years and, now that he's 'crossed over', his wife has insisted on him making this double appointment for 'the full 40 clicks service'. Peter is a nonsmoker with no significant past history. He is adopted and has no knowledge of his biological family. As a taxi driver, he limits his alcohol intake to 2–3 cans of beer on his days off only. His blood pressure is 125/85 mmHg. He has never had a cholesterol or glucose test. Peter is 180 cm tall and weighs 98 kg.

Question 1

Peter's body mass index (BMI) is:

A. 30.2
B. 32.0
C. 33.6
D. 35.1
E. 36.4.

Question 2

With a BMI in the obese range and as yet unknown lipid and diabetes risks, you decide to engage Peter in a consideration of his lifestyle. What is the most appropriate first step?

A. explain to him how his failure to balance his energy input with its expenditure is placing him at great risk
B. provide him with written information on low glycaemic index diets
C. arrange for him to enrol in your practice nurse's lifestyle modification class
D. refer him to a dietician for prescription of a low fat, high protein diet
E. assess which stage of change Peter is currently at.

Question 3

As you talk with Peter during your examination, he ruefully admits that he has not previously given much thought to changing his lifestyle. All through his 20s and 30s he felt 'bullet proof' and rarely worried about his health. Recently, his best mate had a myocardial infarction and Peter finally agreed with his wife that it was time to visit the doctor, but he's not confident he can make many changes. Peter is currently in:

A. precontemplation
B. contemplation
C. preparation
D. denial
E. action.

Question 4

The most appropriate approach to helping Peter control his overeating is to:

A. classify his intake into 'good' and 'bad' foods
B. ask him to record his weight daily
C. limit him to low energy foods such as celery and lettuce
D. encourage him to eat more slowly
E. advise him to eat standing up.

Case 2 – Peter Ponderal: his dieting

Peter responds well to your compassionate approach but he finds it very hard to control his overeating. Over several sessions you identify the emotional triggers for his behaviour and he does the best he can. For Christmas he receives a range of books on weight loss diets from well meaning family and friends.

Question 5

The only popular diet book with a guarantee of success is:

A. The Da Vinci Casserole
B. Harry Potter and the Goblet of Fat
C. Prunes and Prejudice
D. The CSIRO diet
E. none of the above.

Question 6

Peter's mate (recovering from his heart attack) has told him to avoid all fat in his diet. As Peter's total cholesterol was 6.1 mmol/L, you have already discussed a low animal fat diet with him. Low fat diets:

A. may allow a reduction in antihypertensive medication
B. have higher energy density than high fat diets
C. reduce weight by an average of 10 kg for up to 3 years
D. have no impact on diabetes
E. cause limited satiety due to their low fibre content.

Question 7

High protein diets such as the CSIRO diet:

A. are also relatively high in fat (>40%)
B. cause increased satiety
C. allow increased carbohydrate intake
D. cause increased triglyceride levels
E. improve renal function.

Question 8

Peter asks about using the meal replacement 'PlastoSludge' to hurry up his weight loss. Meal replacements:

A. must replace the three main meals each day
B. only cause modest losses of less than 2 kg per year
C. can maintain a 10% weight loss for up to 5 years
D. can only be used on alternate days
E. are subsidised by the PBS.

Case 3 – Peter Ponderal: pharmacotherapy options

Despite all your support and his best efforts, Peter's weight keeps on increasing. He is now 110 kg with a BMI of 34. His wife is complaining of his snoring and he is really frustrated that he can't chase his children around the soccer

pitch. He asks about medications to make him lose weight.

Question 9

Pharmacotherapy for weight loss is usually considered:

A. when BMI >25 in people of Asian ethnicity
B. for short term weight loss before a special occasion (eg. wedding)
C. when BMI >25 in people with type 2 diabetes
D. as contraindicated in people with obstructive sleep apnoea
E. as supplementary therapy to lifestyle modification.

Question 10

Sibutramine:

A. reduces fat absorption from the gut
B. does not require lifestyle modification in order to be maximally effective
C. is safe for use by individuals with cardiac failure
D. provides a mean weight loss of 4.5 kg at 1 year
E. has been demonstrated as safe and effective for up to 5 years.

Question 11

Peter is lost to follow up for some time and, when he eventually brings in one of his children, he explains that his pharmacist has been managing his obesity with a new medication. Peter's blood pressure is now 145/95 on repeated measuring and he is overdue for a cholesterol check. The medication being sold to Peter is most likely to be:

A. sibutramine
B. diethylpropion
C. orlistat
D. phentermine
E. rimonabant.

Question 12

After a full check up and appropriate investigation, Peter agrees to commence antihypertensive medication and to re-engage with you in a comprehensive cardiovascular risk management plan. His total cholesterol remains 6.3 mmol/L with triglycerides of 2.2 mmol/L. His BMI is 35 kg/m2. Peter's frustration is palpable and he asks about 'quick fixes' to at least get things moving. Another mate of his who drives trucks from Sydney to Perth has recommended some medications that he has found very useful. The use of noradrenergic compounds for weight loss:

A. can result in side effects including insomnia, palpitations, agitation and increased risk of suicide
B. is suitable for people with diabetes and hypertension in association with their obesity
C. results in excessive salivation
D. produces satisfactory long term results for most users
E. requires a 'drug of dependence prescribing authority'.

Case 4 – Peter Ponderal: surgical options

With his BMI hovering around 35 kg/m2, his blood pressure barely controlled, his lipid profile borderline, and growing signs of insulin resistance, Peter comes to see you one last time. He feels that you have dismissed all the ideas he has come up with to help him lose weight and he now believes there is only one option left: surgery. The idea terrifies him but he can see no other solution.

Question 13

Gastric bypass, biliopancreatic diversion and jejuno-ileal bypass all have in common the fact that they:

A. are safe and well tolerated
B. achieve major weight loss for the severely obese
C. prevent malabsorption of ingested food
D. are not associated with weight regain
E. can be performed as a day case.

Question 14

Laparoscopic adjustable gastric banding involves:

A. stapling the gastric fundus
B. placing a space occupying balloon into the stomach
C. plicating the fundus around the lower end of the oesophagus
D. placing a silicone device around the top of the stomach
E. placing a silicone band around the pylorus.

Question 15

After the placement of a LAGB, patients must:

A. adjust emotionally and socially to consuming smaller quantities of food
B. adhere to a diet that is low in residual bulk
C. avoid drinking carbonated fluids
D. commence or continue medication to combat gastro-oesophageal reflux
E. have the device adjusted each 3 months.

Question 16

As therapeutic partners, you and Peter have followed the NHMRC's recommendation to adopt a stepped approach to managing his weight. Which of the following approaches is suitable for all patients at all times?

A. high protein/low carbohydrate diet
B. appetite suppression medication
C. fat malabsorption inducing medication
D. bariatric surgery
E. an empathic approach to lifestyle modification.

ANSWERS TO JULY CLINICAL CHALLENGE

Case 1 – Betty Brookes

1. Answer A
The first step in managing a patient with a leg ulcer, or a patient with any problem, is to undertake a thorough, focused clinical assessment. In this case, key issues are general health, current and past medical problems, social history, mobility, and skin, leg and ulcer assessments.

2. Answer C
Approximately 80% of chronic leg ulcers are the result of venous hypertension. Most of the others are caused by arterial insufficiency or a combination of arterial and venous problems. Venous disease typically is associated with brawny skin, lipodemosclerosis and haemosiderin staining.

3. Answer D
The ABPI is an indicator of arterial perfusion. A cuff is inflated over the lower calf and the pressure at which the dorsalis pedis can be just heard with a Doppler ultrasound probe is recorded. This is divided by the brachial systolic pressure. Compression bandaging up to 40 mmHg is safe for patients with APBI in the range 0.8 and 1.2.

4. Answer D
Betty's ulcer is typical of venous ulceration. Arterial ulcers may also occur in the gaiter region or over bony prominences, particularly when associated with pressure trauma. They are often deeper, with a punched out appearance with devitalised tissue in the base and less exudate.

Case 2 – Kane Bruce

1. Answer D
No prizes for the correct answer on this one. A calm, unhurried approach is essential. Bobbing down to the child's level, leaving the child in the parents arms, explaining what is happening directly to the child in an age appropriate way and using analgesia, distraction and splinting for pain control may all assist in the assessment process.

2. Answer E
Dirt and foreign material in the wound must be located and removed before closure. Good quality tap water can be used. Normal saline irrigation under pressure via a 19 gauge needle on a 10–20 mL syringe is useful. Aqueous chlorhexidine is painful and of doubtful benefit. All but superficial wounds caused by glass should be investigated with plain soft tissue X-ray.

3. Answer E
As Kane has had his routine immunisations he requires neither tetanus vaccination or immunoglobulin. For most lacerations, prophylactic antibiotics are not indicated.

4. Answer C
Any area of the skin may be glued but gluing in the vicinity of the eye requires extreme care. Remove hair from scalp wounds, but cutting of the hair is not required. Care needs to be taken to avoid getting adhesive into the wound itself. If adhesive sticks to the glove, the surgeon's hand can be removed from the glove and the glove fingers cut close to the child's skin and left to spontaneously detach.

Case 3 – Jon Dinh

1. Answer C
Patient factors impact on healing and although these are often out of the control of the surgeon, addressing correctable health problems and being aware of previous scarring problems is important. In elective procedures planning the site, shape and orientation of the wound improves the result. Good lighting and equipment are vital, as is atraumatic tissue handing, with the use of toothed forceps, skin hooks or cat's paws.

2. Answer A
Ideally elliptical incisions should be four times as long as they are wide and placed parallel to RSTL and along natural borders between regions such as forehead wrinkles or nasolabial folds. Incisions should be made cleanly and perpendicular to the skin surface.

3. Answer C
Absorbable deep dermal sutures with buried knots facilitate skin eversion and decrease tension on superficial sutures and so improve results. Continuous subcuticular sutures provide excellent skin edge apposition without the risk of crosshatching. Facial superficial sutures are removed after 5 days.

4. Answer B
A far-near near-far pulley suture is a variation of the vertical mattress suture used to achieve wound closure under tension. The initial loop is inserted about 5 mm from one side of the wound and brought out about 2 mm from the edge on the other side. It is then inserted 2 mm from the edge on the first side and exits 5 mm from the wound on the other creating a pulley effect.

Case 4 – Sandra Martin

1. Answer D
Infiltrating BCC may be larger than they appear clinically. Nonsurgical management is inappropriate in this case as residual tissue may continue to invade the nasal tissues.

2. Answer C
Mohs surgery is a technique for managing difficult nonmelanoma skin cancer. The tumour is excised and the specimen is examined by frozen section histology. Further excision occurs until there are clear margins.

3. Answer A
Mapping and orientation of the specimen in Mohs surgery is vital to ensure re-excision is occurring in the correct area. Flaps need to be slightly larger than the defect and tension on the pedicle avoided. A disadvantage is additional scarring in the donor site.

4. Answer E
Sandra has sun damaged skin and already has had two BCCs so warrants ongoing skin surveillance. Although the presenting lesion is not concerning and does not require treatment, it provides an opportunity to pick up other lesions not noticed by the patient.

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