



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 multiple choice questions of the RACGP Fellowship exam. The quiz is endorsed by the RACGP Quality Improvement and Continuing Professional Development Program and has been allocated 4 Category 2 points per issue. Answers to this clinical challenge are available immediately following successful completion online at www.gplearning.com.au. Clinical challenge quizzes may be completed at any time throughout the 2011–13 triennium, therefore the previous months answers are not published.

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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

Raymond Wang

Raymond, 29 years of age, has been sent in to see you by his partner, Eloise, to discuss fertility concerns. They have been trying to conceive for 18 months without success and she is seeing her own GP for assessment.

Question 1

The most common cause of male infertility is:

- A. cryptorchidism
- B. endocrine disturbance
- C. gonadal toxins
- D. idiopathic
- E. urogenital infection.

Question 2

Raymond has not previously fathered a child and there are no concerning features on history. Examination reveals a varicocele. Considering varicocele and male infertility:

- A. no relationship has been found
- B. varicolectomy can prevent decline in testicular function but not reverse damage
- C. microsurgical varicolectomy has been associated with improvement in sperm concentration, motility and morphology
- D. it is more cost effective to use sperm retrieval and ICSI to achieve conception than to treat the varicocele
- E. it is a rare, reversible cause of male infertility.

Question 3

You ask Raymond to collect a semen sample for analysis. It would be important to advise all of the following EXCEPT:

- A. he must abstain from sexual activity for 2 weeks before collection
- B. two samples will be required, collected at least 1 month apart
- C. the sample must be kept at body temperature during transport to the laboratory
- D. semen can be collected by either intercourse or masturbation into a sterile jar
- E. the sample must be delivered to the lab promptly after collection so it can be examined within 1 hour.

Question 4

Raymond's first sample returns the following results: volume 1.55 mL, total motility 31%, sperm morphology 3.8% normal forms. Your interpretation of these results is:

- A. he is unlikely to achieve spontaneous conception
- B. motility is low and morphology borderline
- C. volume is high and motility and morphology normal
- D. all parameters are normal
- E. Raymond should be considered for ICSI given the abnormal motility.

Case 2

Rebecca Bridgewater

Rebecca is 38 years of age and has been trying to conceive unsuccessfully for 12 months. She is generally well. Her BMI is 29 kg/m². You determine that immediate referral to a specialist is most appropriate.

Question 5

Baseline investigations you may consider ordering while awaiting her appointment include all EXCEPT:

- A. day 21 serum progesterone levels
- B. thyroid stimulating hormone
- C. anti-Müllerian hormone levels
- D. pelvic ultrasound
- E. rubella antibodies.

Question 6

Rebecca returns to see you after her specialist assessment. The only problem discovered was irregular ovulation and she commenced clomiphene treatment. Regarding ovulation induction, you are able to tell Rebecca that:

- A. she has a 15–40% chance of pregnancy per cycle
- B. there is a very low risk of multiple pregnancies
- C. it addresses the causes of infertility related to advanced maternal age
- D. attempting modest weight loss will have no effect on the outcome of her treatment
- E. thrombosis is an important possible complication of her treatment.

Question 7

Rebecca fails to conceive with ovulation induction and progresses to IVF treatment. Techniques used routinely to maximise safety and success of IVF include all EXCEPT:

- A. encouraging lifestyle modification
- B. extended embryo culture
- C. glucose uptake of embryos
- D. pre-implantation genetic diagnosis
- E. single embryo transfer.

Question 8

Happily, Rebecca goes on to have a successful IVF pregnancy and gives birth to a healthy baby girl. At a subsequent consultation, she asks you about 'freezing eggs' in reference to a friend who has been diagnosed with breast cancer. You are able to tell her that:

- A. if her friend is aged 30–40 years there is a <10% chance of premature ovarian failure after treatment

- B. if chemotherapy results in ovarian failure, this is always permanent
- C. new freeze-thawing techniques give good oocyte survival rates but there is a high rate of attrition from oocyte to usable embryo
- D. ovarian tissue excision and freezing before therapy and subsequent grafting provides the highest chance of conception
- E. the technology has not progressed to the point where it is worth her friend discussing this option with her treating doctors.

Case 3

Phuong Nguyen

Phuong, aged 18 years, presents with a history of irregular periods since menarche at age 15. Her cycles are at least 35 days but often longer and unpredictable. She wishes to try an oral contraceptive pill.

Question 9

You recognise the importance of considering a diagnosis of PCOS for Phuong. Things to consider in your assessment would include:

- A. commencing a COCP for cycle control will not affect Phuong's free androgen index
- B. hirsutism must be present to diagnose PCOS using the Rotterdam criteria
- C. if Phuong had regular periods you could be sure that she was ovulating
- D. ultrasound diagnosis of polycystic ovaries requires the presence of at least 12 antral follicles in each ovary
- E. ultrasound is unreliable in the diagnosis of polycystic ovaries in adolescent and young women.

Question 10

Phuong's results are consistent with a diagnosis of PCOS. Her BMI is 27 kg/m² and she smokes five cigarettes daily. She hasn't noticed any features of hyperandrogenism and there is a strong family history of type 2 diabetes. Your initial management plan should include all of the following EXCEPT:

- A. a low dose oral contraceptive for cycle control
- B. a regular, structured exercise regimen
- C. advise smoking cessation
- D. aldactone therapy
- E. oral glucose tolerance testing.

Question 11

Assessment should include emotional health screening. Women with PCOS are more likely to suffer all of the following EXCEPT:

- A. depression and anxiety
- B. eating disorders
- C. poor self esteem
- D. sexual dysfunction
- E. substance use disorders.

Question 12

Phuong does well on her COCP and quits smoking. At age 25 years, she is considering starting a family and presents to discuss the effects of PCOS on fertility. Her BMI is 27 kg/m². You are able to advise her that:

- A. she should commence clomiphene citrate to induce ovulation as soon as she can
- B. an intensive lifestyle program aimed at achieving around 5% weight loss is recommended for the first 6 months
- C. she needs immediate referral to a fertility specialist
- D. given her family history of diabetes, metformin would be the first line treatment for infertility
- E. PCOS is a rare cause of anovulatory infertility.

Case 4

Jessica Hanson

Jessica, 22 years of age, presents to discuss starting contraception. She has been in a relationship for 2 months and is currently using condoms for contraception.

Question 13

When considering possible options for Jessica, which of the following is true:

- A. the COCP is the most appropriate method for Jessica's age group
- B. a LARC such as the contraceptive implant or IUD can provide cost effective contraception for young women
- C. an IUD is not suitable for nulliparous women
- D. young women are unlikely to choose long acting methods when they are offered
- E. the depot contraceptive injection should not be considered due to its effects on bone density in young women.

Question 14

After careful counselling, Jessica decides to try the levonorgestrel IUD. You are accredited to insert these, and do so for Jessica in the practice after infection screening and a Pap test. She returns to see you after 6 months, concerned that she can't feel the strings of the IUD. In relation to this problem, which of the following is true:

- A. if the device can't be localised on ultrasound, it is important to perform plain abdominal X-rays to exclude the possibility of migration
- B. Jessica will need to be referred to a gynaecologist who can attempt to retrieve the strings
- C. Jessica is at high risk of pelvic infection due to her IUD
- D. it is not appropriate to attempt string retrieval with a cytobrush twirled in the external os
- E. you can assume the IUD is in situ and Jessica has good contraceptive cover, even if you can't retrieve the strings.

Question 15

Jessica's IUD is found to have been expelled and she decides to try a COCP as an alternative. Which of the following counselling points is correct:

- A. if Jessica experiences irregular bleeding in the first few months, this means that she does not have good contraceptive coverage
- B. the pill must always be commenced according to the directions on the packet and will not take effect until after the first week
- C. Jessica must use alternative contraception if she is prescribed antibiotics such as amoxicillin
- D. if Jessica can link the taking of her pill with another daily routine she will be more likely to remember to take it
- E. a high dose (eg 50 µg ethinyloestradiol) COCP is not adequate to counteract the liver enzyme inducing effect of medications such as carbamazepine.

Question 16

Jessica comes back to see you after another 6 months. She is tired of taking a pill every day and wishes to try another LARC. Points to remember when discussing the contraceptive implant or injection include all EXCEPT:

- A. the new device for implant insertion makes deep insertions less likely
- B. the injectable contraception has a higher incidence of amenorrhoea
- C. a deep implant can now be removed under X-ray guidance as it has had barium added to it
- D. a comprehensive leaflet on different contraceptive choices may aid Jessica in her decision
- E. some women experience weight gain with injectable contraceptives.