

Question 20 (12 marks)

A 6 year old girl is brought to the emergency department by her concerned parents. She is unwell and complaining of a painful right eye. Her temperature is 38 deg celsius and her left eye region is normal.

Her photo is shown in **PROPS BOOKLET ; page 11.**

- a. List four (4) examination findings you will look for, which would suggest a major complication.(4 marks)

1. ___ Proptosis _____
2. ___ Ophthalmoplegia _____
3. ___ Decreased Visual Acuity _____
4. ___ Chemosis _____
5. ___ Altered conscious state _____
6. ___ Increased Ocular pressure _____
7. ___ Afferent pupillary defect _____
8. ___ Signs of septic shock _____

Feedback Comments:

- Need to list examination findings that would suggest a **MAJOR** complication – that is orbital cellulitis with a collection being present
- Eye discharge is not a finding that would suggest a major complication
- painful eye movements is a symptom not an examination finding. Also the scenario states that the child has a painful eye.
- One response per line – if multiple responses were written on a line, each of these were marked as separate points and subsequent responses on later lines were ignored.

b) List three (3) key investigations for this child. State one (1) justification for use in this child. (6 marks)

	Investigation	Justification
1	FBE	Raised WBC consistent with sepsis which would be most likely with orbital cellulitis
2	Blood Cultures	To culture causative organism for cause of orbital cellulitis
3	CT orbit	Looking for collection behind eye

Feedback Comments:

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- The question asked for 3 **KEY** investigations – that is investigations that would make the diagnosis, rule out a complication or guide treatment
- Examination is not an investigation. So slit lamp examination / tonometry are NOT investigations
- Key investigation in my opinion are FBE, Blood Cultures and CT orbit for the reasons I have listed
- I did not accept both FBE and CRP if written as 2 separate investigations. I very much doubt that doing both would add much to your diagnosis and management than one alone does.
- As a consultant you need to choose investigations that will
 1. give you the most likely diagnosis,
 2. be appropriate for the patient
 3. guide management
 4. have clinicians who have the expertise to undertake these investigations and interpret them

I very much doubt that this child would comply with an orbital ultrasound due to her eye pain but more so I very much doubt that there would be very many clinicians (in particular sonographers unless they work at the RVEEH) who would have the expertise to undertake this investigation nor would it be readily available. It is also unlikely to clearly be able to see an abscess if one has formed. A CT would still be needed to give the definitive answer

Question 20 (continued)

c) List two (2) options for antibiotic treatment, include dose and route (2 mark)

1) Ceftriaxone 1 gram (50 mg / kg) (estimated weight = 20 kg) intravenously bd

_2) Flucloxacillin 1 gram (50mg/ kg) intravenously qid

Frequency of dosing is not required as the question did not ask for it

Feedback Comments:

- The scenario gives you the child's age. Hence you **MUST** give a dose that you will give **THIS** child. Not merely a weight based dose.
- The child requires Staph cover, Strep cover, Haemophilus cover – so requires Ceftriaxone (3rd Generation Cephalosporin) and Flucloxacillin. I did accept other antibiotics which would cover these e.g. Cephazolin and Clindamycin for Staph cover and Gentamicin for Gram negative cover
- The frequency of dosing was not required. However, if the wrong frequency was given then marks were deducted. E.g. Ceftriaxone IV qid
- This child is unwell and requires the antibiotics IV not oral.

