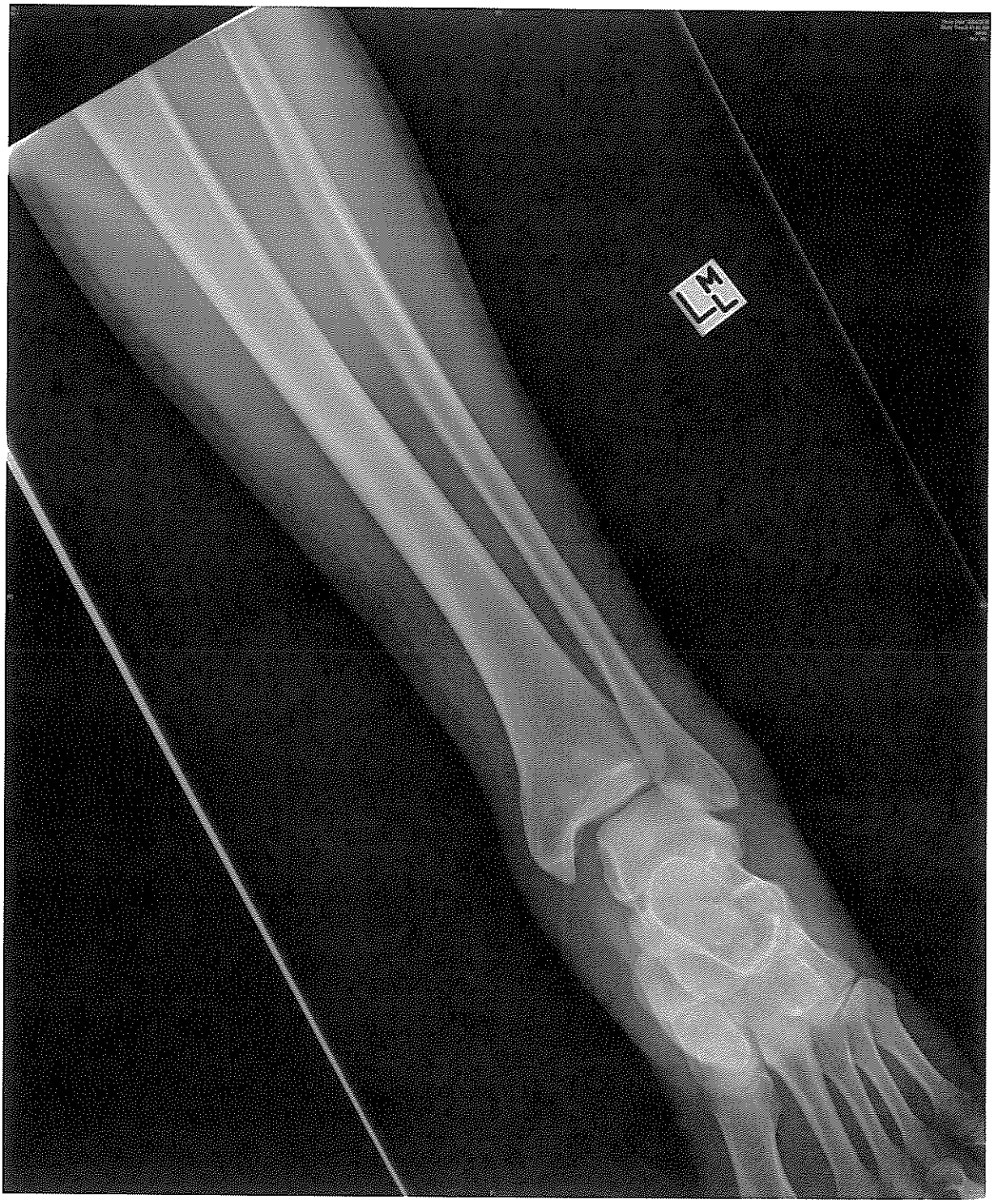


SAQ 17 (12 marks)

A 4 year old boy is brought in to the Emergency Department by his concerned parents. He has been unwell with a fever for 6 days. He has a diffusely erythematous pharynx and a unilateral 3cm cervical lymph node on the right. See attached images.

What is the most likely diagnosis (1 mark)

1. Kawasaki disease

Give 4 differential diagnosis (2 marks)

a. Viral exanthems
b. Strep disease: eg scarlet fever, toxic shock syndrome
c. Staph disease: eg scalded skin syndrome, TSS
d. Steven Johnsons syndrome
e. Drug reaction

Outline the typical features of this condition? (4 marks)

2. Clinical critieria to diagnose 'typical' KD:
   A. fever for 5 or more days, and
   B. at least 4 out of 5 of:
      a. bilateral non-exudative conjunctivits
      b. oropharyngeal mucous membrane changes: pharyngeal erythma, red/cracked lips, 'strawberry' tongue
      c. cervical lymphadenopathy
      d. peripheral extremity changes: acute: diffuse erythema and swelling of hands/feet, convalescent phase: desquamation
      e. polymorphous generalized rash

List 2 potential complications? (2 marks)

The primary complications of Kawasaki disease (KD) are cardiac sequelae, although noncardiac complications also may occur (table 1). (See'Introduction' above.)

•KD shock syndrome (KDSS), defined as sustained systolic hypotension or clinical signs of poor perfusion, is a potentially life-threatening complication. (See 'Shock' above.)

•Macrophage activation syndrome (MAS) is a rare and potentially life-threatening complication of KD that should be considered in patients with persistent fever after intravenous immune

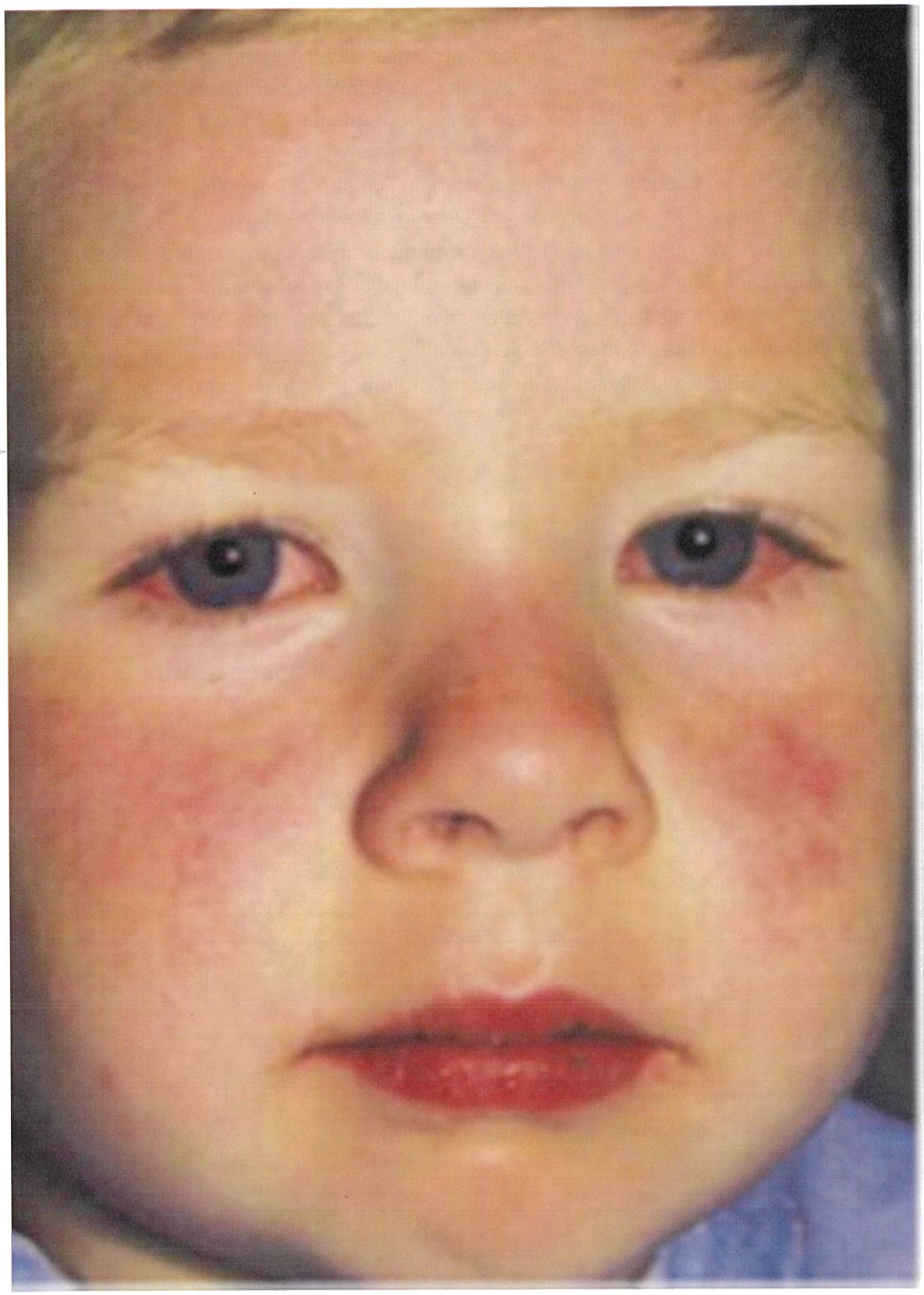
globulin (IVIG) therapy. (See 'Macrophage activation syndrome' above and "Clinical features and diagnosis of hemophagocytic lymphohistiocytosis", section on 'Rheumatologic disorders/MAS'.)

- The major complication of KD is coronary artery (CA) aneurysms. However, other cardiac sequelae can occur, including decreased myocardial contractility, coronary arteritis without aneurysms, mild valvular regurgitation (primarily mitral valve involvement), and pericardial effusion. Acute myocardial infarction is the main cause of death in KD. (See 'Cardiac complications' above and "Cardiovascular sequelae of Kawasaki disease".)
- Vascular changes also may occur in peripheral arteries. Peripheral arterial obstruction can lead to ischemia and gangrene. (See 'Noncoronary vascular involvement' above.)
- Urinary abnormalities and renal disease, with the exception of sterile pyuria, are uncommonly associated with KD. (See 'Urinary abnormalities and renal disease' above.)
- Children with KD may present with a wide variety of gastrointestinal manifestations, rarely including acute abdominal catastrophes. (See'Gastrointestinal abnormalities' above.)
- Sensorineural hearing loss, usually transient and asymptomatic, can be seen following KD. (See 'Central nervous system' above.)

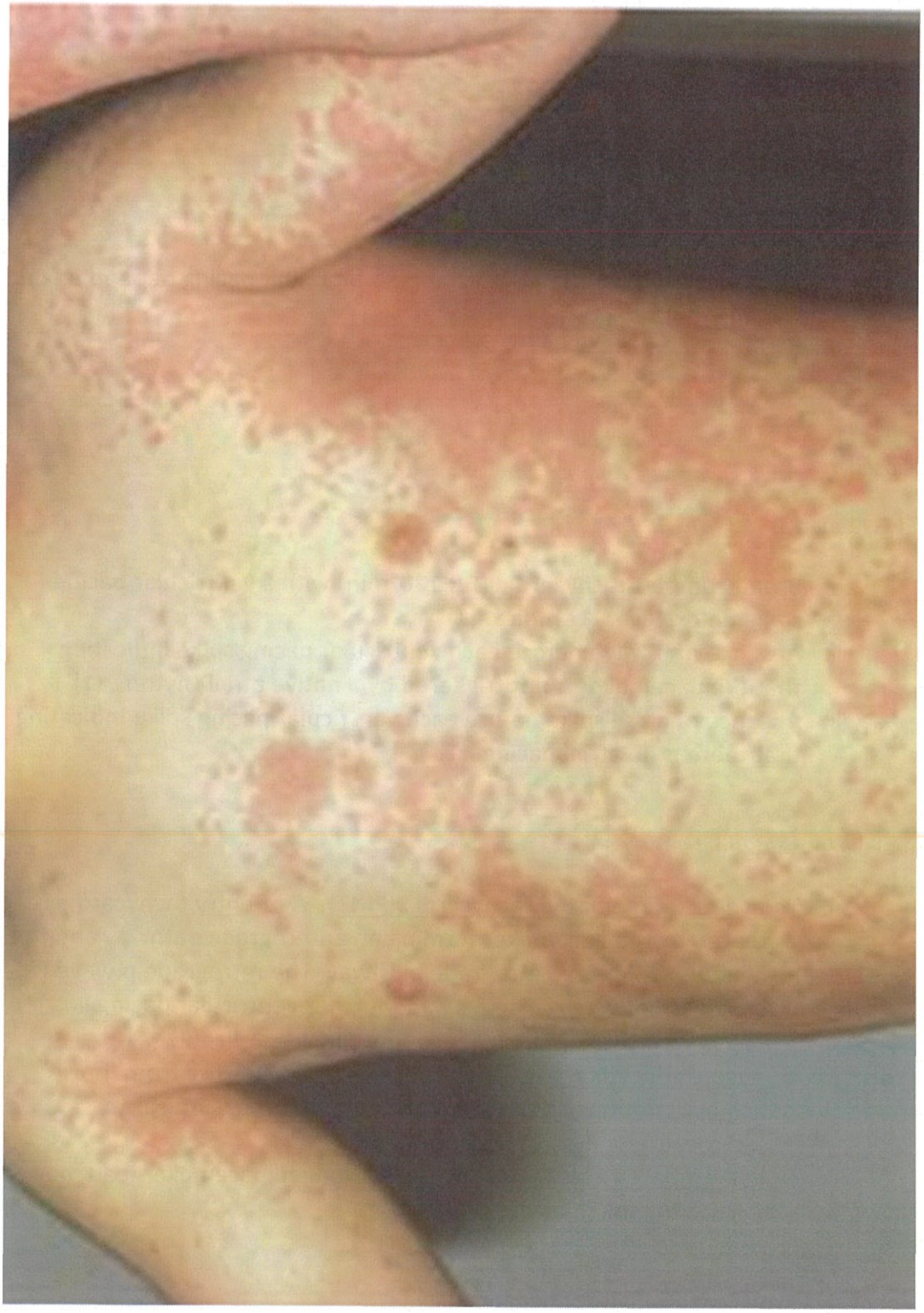
Outline your management? (4 marks)

1. Specific management: **IV immunoglobulin** with high dose **aspirin**, echo.
   Supportive; Fluids/analgesia/etc if indicated.
   Dispostion: Admit

SAQ 17 images



SAQ 17 images



SAQ 18 (10 marks)

A 74yo woman presents with lightheadedness, lethargy and palpitations.

Her vital signs are BP 100/60, HR 124/min, temp 37, SaO2 99% on room air.

She has a past medical history of type 2 diabetes, hypertension and has a pacemaker for heart block. Her pacemaker card indicates she has a DDD pacemaker.

Describe the DDD function of her pacemaker (2 marks)

a. Dual (atrial and ventricular) chamber pacing. (0.5)
b. Dual (atrial and ventricular) chamber sensing. (0.5)
c. Dual response to sensing in that it will trigger or inhibit pacing depending on the underlying rhythm. (1)

Her ECG is enclosed.

Describe her ECG (2 marks)

i. Broad complex tachycardia (HR 120/min) with a ventricular pacing spike before every complex. (1)
ii. Absence of p wave before each ventricular pacing spike indicating that the pacemaker is not triggered by a native atrial rhythm. (1)
iii. Absence of atrial spike before each ventricular pacing spike indicating that there is no atrial pacing. (1)

List 2 differential diagnoses (2 marks)

i. Pacemaker mediated tachycardia (PMT). A re-entry tachycardia is created by the pacemaker forming an anterograde pathway and the AV node acting as a retrograde pathway. The retrograde p wave is sensed as native atrial activity and further ventricular pacing is propogated causing the inappropriate tachycardia. (1)
ii. Sensor-induced tachycardia. The sensor may misfire from 'noise' such as vibrations, loud noises, hyperventilation, surgical electrocautery, etc. (1)
iii. Lead displacement dysrhythmia. A dislodged pacemaker lead may be irritating the myocardium. (1)

List 4 management steps you would initiate for her (4 marks)

a. Urgent cardiology referral and pacemaker interrogation. (1)

SAQ 2 (9 marks)

A 4 year old boy with autism presents with his mother having placed a foreign body up his nose. (See image)

He is agitated and unco-operative.

List the three safest methods of removal in this case (3 marks):

Answer – Positive Pressure insufflation (Carer or BVM)

Balloon Catheter extraction – Foley or Fogarty

Sedation and direct instrumentation

Before attempting removal by techniques not involving sedation what steps are necessary in preparation (2 marks)?

Answer must include - Explanation to the child and carer and verbal consent.

Topical application of local anaesthetic vasoconstrictor spray such as Lignocaine Hydrochloride/Phenylephrine.

Due to the child's agitation and lack of co-operation there is a failed attempt at removal of the Foreign Body and it can no longer be visualised. What circumstances would indicate the need for consideration of bronchoscopy (4 marks)?

Answer - Coughing and choking

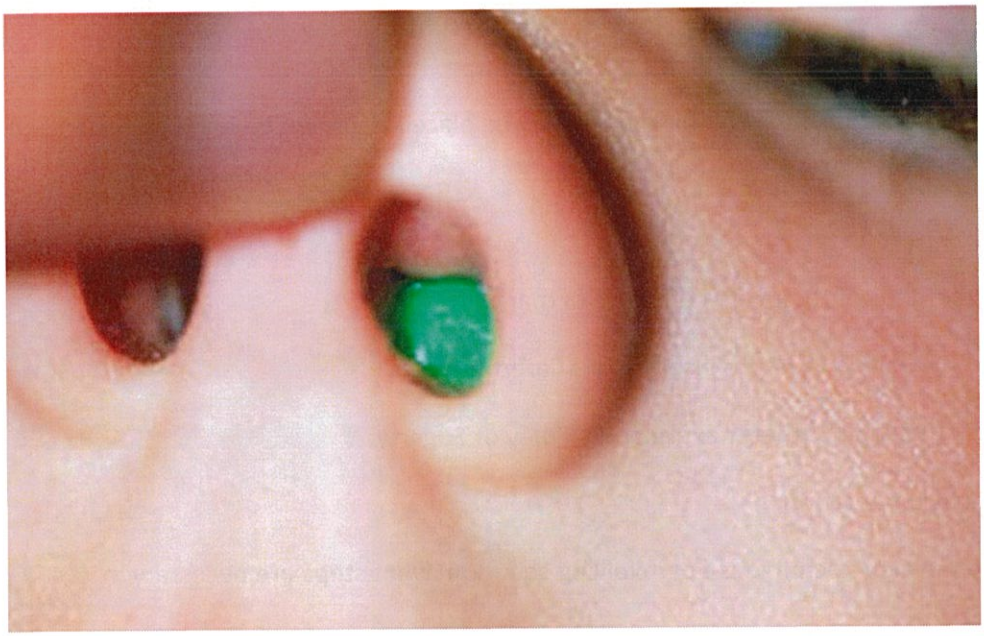
Stridor

Unilateral wheeze

Hypoxia

Score - 4/4 – lose 2 points for any item left out.

SAQ 2 image



QUESTION 2 (9 MARKS)

A 4-year-old boy with autism presents with his mother having placed a foreign body up his nose.

See image on page 5 in separate book

He is agitated and unco-operative.

1. List the three safest methods of removal in this case. (3 marks)

   (1) _____

   (2) _____

   (3) _____

2. Before attempting removal by techniques not involving sedation, what steps are necessary in preparation? (2 marks)

_____

_____

_____

_____

3. Due to the child's agitation and lack of co-operation, there is a failed attempt at removal of the Foreign Body and it can no longer be visualised. What circumstances would indicate the need for consideration of bronchoscopy? (4 marks)

_____

_____

_____

_____

QUESTION 3 (12 MARKS)

A 60-year-old lady presents with vertigo.

In column 1, list **4** important diagnoses to consider in any patient that presents with persistent vertigo.

In column 2, list the historical features that would suggest each diagnosis.

In column 3, list the findings on physical examination that would suggest each diagnosis.

Column 1: Diagnosis	Column 2: Historical Features	Column 3: Signs on Examination

Question 2

Monash Practice Fellowship Exam

Inguinal Hernia

ANSWERS:	AVOID
• Intermittent pain and swelling • Tender inguinal lump • Cannot get above it • May be reducible • Cough impulse	• Sudden onset – likely has been intermittent • Obstruction/strangulation • Age

Surgical referral

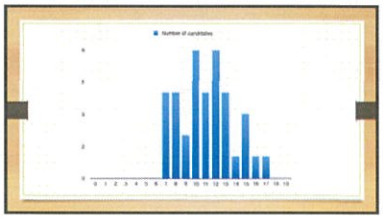
ANSWERS:	AVOID
• <3months • Unable to reduce • Signs of obstruction • Strangulation • Perforation/sepsis/shock	• Ongoing pain • Both irreducible and incarcerated

Testicular Torsion

ANSWERS:	AVOID
• Tender /Swollen • Absent cremasteric reflex • Nausea/vomiting • Discolored skin • High riding /horizontal lie • Sudden onset	• Age • Dysuria • Severe pain (already given in stem) • History of same • History of undescended testes

Steps to reduce

ANSWERS:	AVOID
• Explain/Consent • Analgesia/sedation (with doses or type) • Lie flat or 20degrees trendelenburg, relax abdominal muscles • Push hernia with firm constant pressure superior and laterally towards inguinal ring	• Unqualified anaglesia • Explanation and Consent seperately • "reduce hernia" "push hernia back"



Torsion of Appendix Testis

ANSWERS:	AVOID
• Gradual onset • Point/focal tenderness. • Normal lie of testis • Blue dot sign • Cremasteric reflex present	• Sudden onset • Trauma • Age

Reducing Inguinal Hernia

- Place the patient supine in about a 20-degree Trendelenburg position or the "unilateral frog-leg" position
- Grasping the ASIS to prevent lateral movement of pelvis
- Use fingres to prevent hernia overriding external ring, and provide steady gentle pressure to contents of hernia sac

Candidate number _____

Question 2 (19 Marks) 6 minutes

An 18 month old boy presents to the ED with R groin swelling and distress.

(1) Complete the following table stating four (4) historical or examination findings that may be used to differentiate each diagnosis. (12 marks)

	Testicular torsion	Torsion of the appendix testis	Inguinal hernia
1			
2			
3			
4			

Question 2 (continued)

(2) List four (4) steps required to reduce an inguinal hernia (4 marks)

1. _____

2. _____

3. _____

4. _____

(3) List three (3) indications for paediatric surgical consultation in the emergency department in a child with an inguinal hernia. (3 marks)

1. _____

2. _____

3. _____