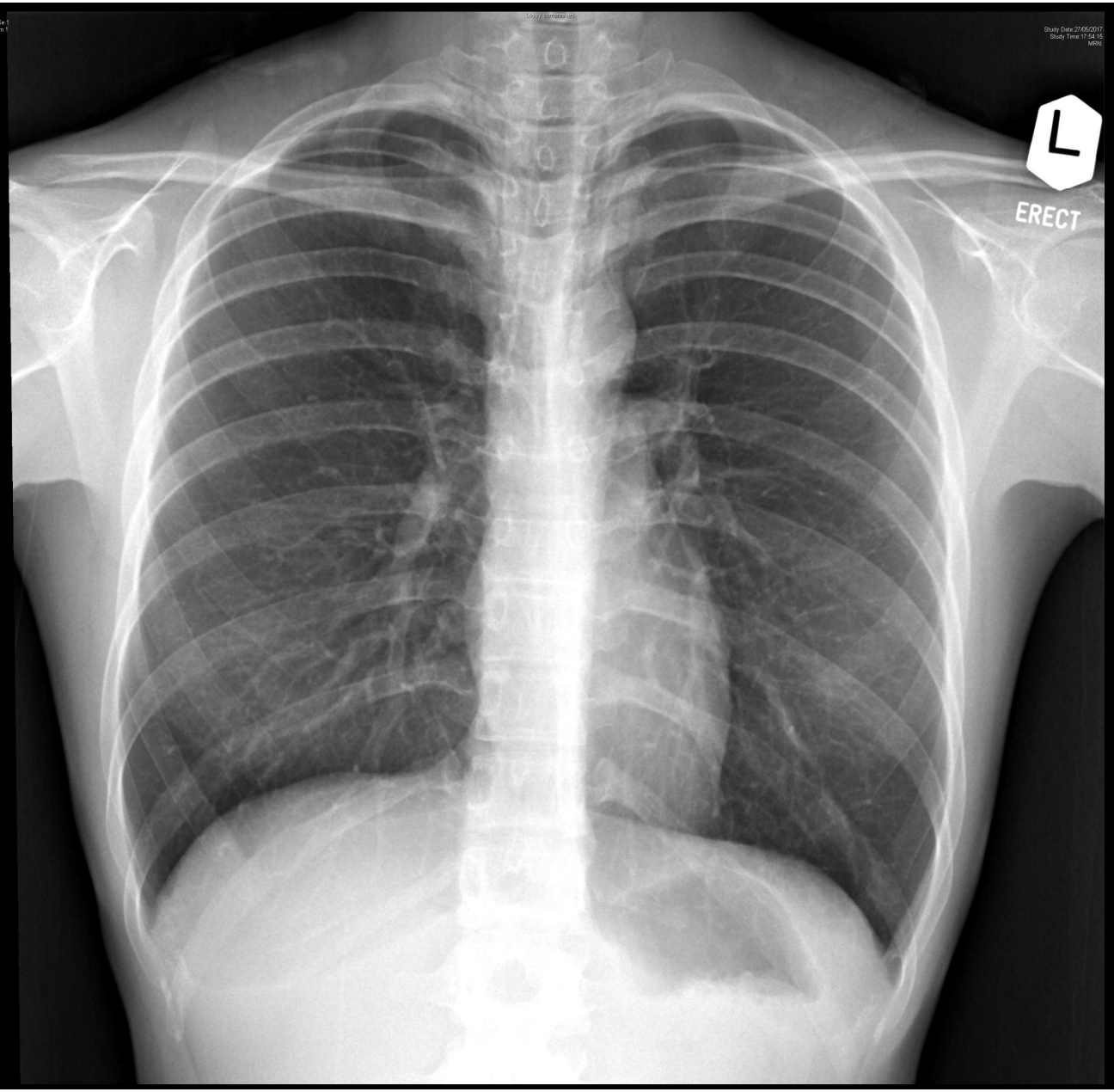
JCM OSCE

July 2017

kwh

Case 1

- F/20, university student
- Non-smoker
- Good past health
- Sudden onset of neck pain, chest pain & SOB during written examination
- BP/P normal
- SpO_2 98% in room air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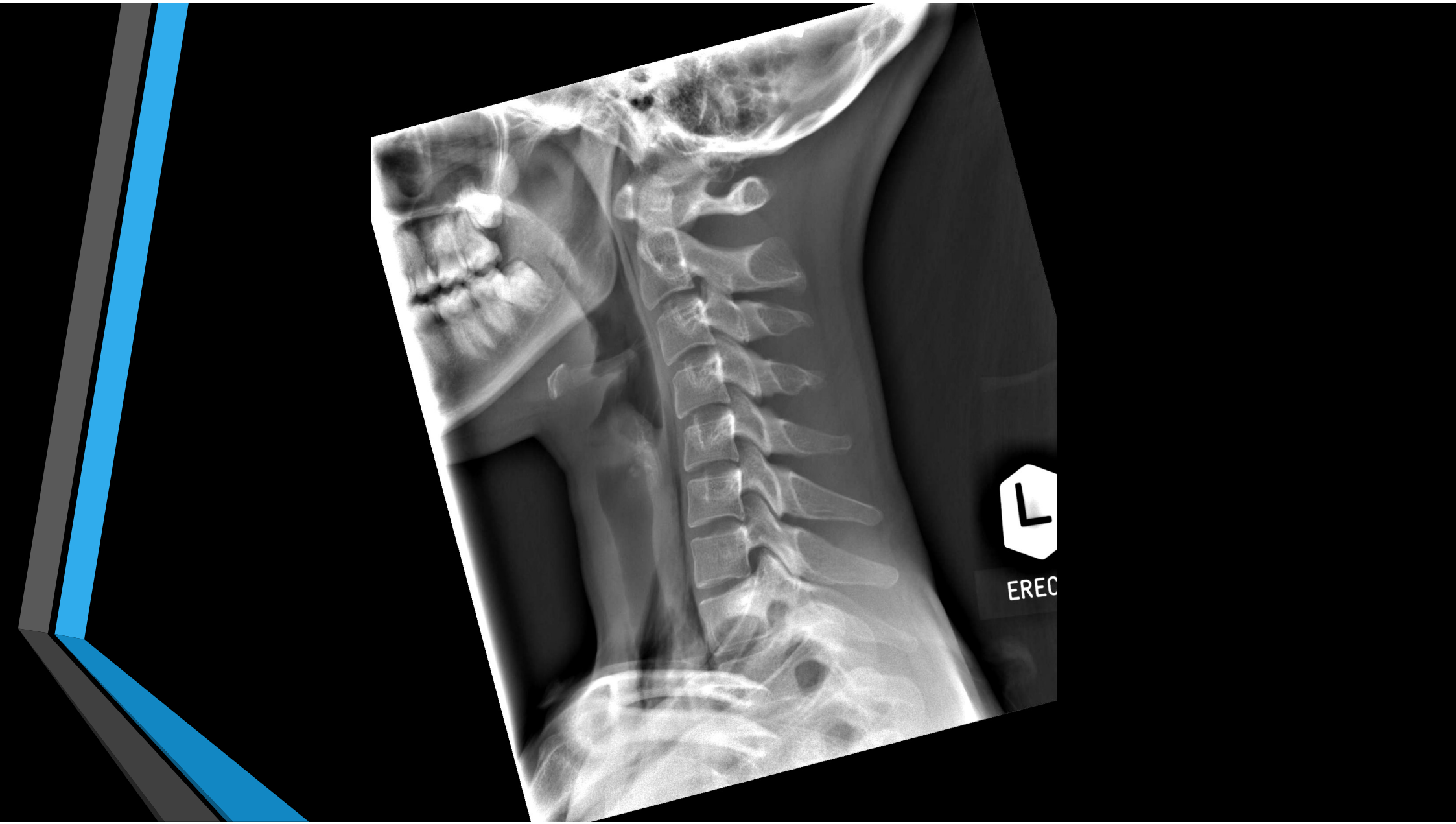
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Questions

- Diagnosis?
- Etiologies?
- Name one eponymous auscultatory sign associated with the condition
- Management?

Answers

- Diagnosis
  - Pneumomediastinum

Answers

- Etiologies
  - Trauma: neck, chest, tracheobronchial tree, esophageal perforation, etc.
  - Iatrogenic: intubation, PPV, bronchoscopy, Heimlich maneuver, etc.
  - Drug abuse: cocaine, marijuana, etc.
  - Intrinsic airway disease: asthma, COAD, etc.
  - Violent coughing, sneezing, hiccupping, vomiting
  - Forceful straining/Valsalva: weight lifting, constipation, childbirth, etc.
  - Environmental: mountain climbing, decompression from diving, etc.
  - Infections
  - Idiopathic

Answers

- Name one eponymous auscultatory sign associated with the condition
  - Hamman's sign
    - Crunching, rasping sound, synchronous with systole at left parasternal edge

Answers

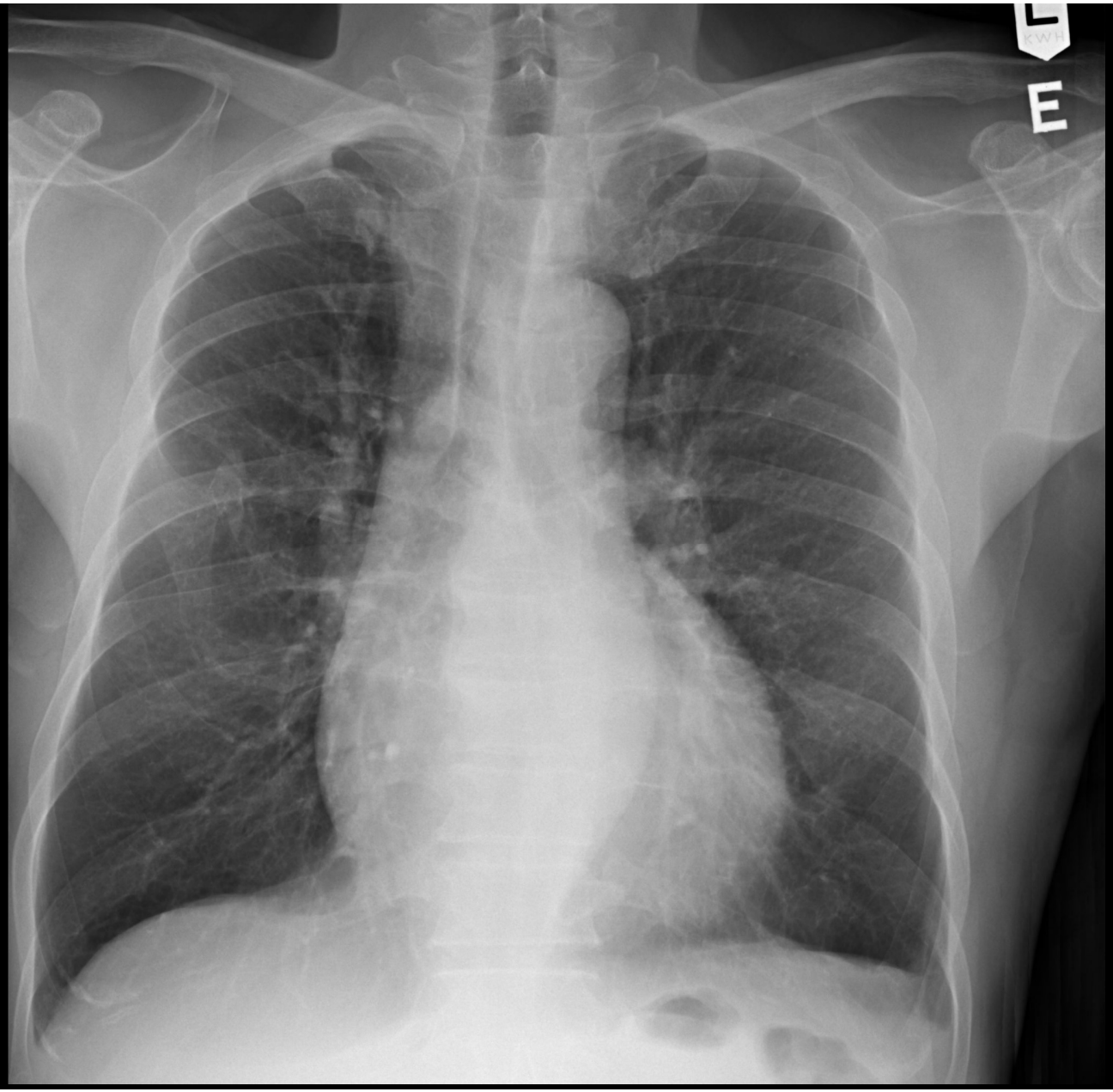
- Management
  - Bed rest
  - Analgesia
  - Nitrogen washout with high flow oxygen
  - Avoidance of Valsalva, straining
  - Treat underlying cause if found

Progress

- OGD: nad
- CT neck + thorax:
  - Presence of pneumomediastinum, extending from just below skull base, along bilateral carotid and retropharyngeal spaces, down to esophageal hiatus.
  - Surgical emphysema over bilateral anterior neck and right supraclavicular fossa.
  - No sizable pneumothorax, hyperdense foreign body, abnormal esophageal wall thickening, extravasation of oral contrast, sizable rim enhancing collection, pneumoperitoneum/ pneumoretroperitoneum in this scan range nor pulmonary bulla
- Completed course of Augmentin
- Asymptomatic & stable vitals all along

Case 2

- M/45
- Chronic smoker
- PHx: Graves disease with RAI, on T_4 replacement
- Chest discomfort x 1/12
- SOBOE+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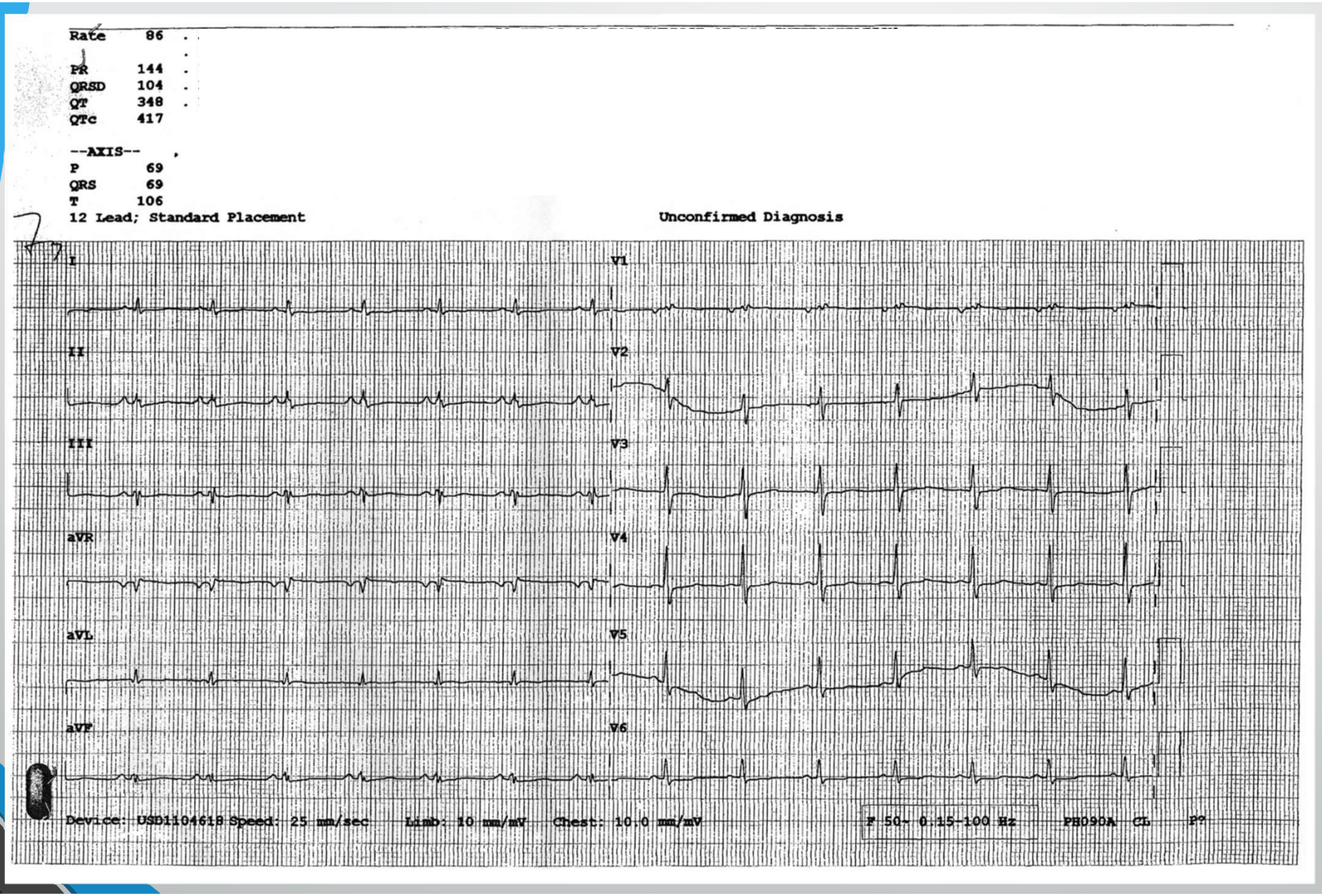

Rate 86
PR 144
QRSD 104
QT 348
QTc 417
--AXIS--
P 69
QRS 69
T 106
12 Lead; Standard Placement
Unconfirmed Diagnosis
I
II
III
aVR
aVL
aVF
V1
V2
V3
V4
V5
V6
Device: USD1104618 Speed: 25 mm/sec Limb: 10 mm/mV Chest: 10.0 mm/mV
F 50~ 0.15-100 Hz
PH090A CL
P?

Questions

- Name the CXR abnormalities
- Name the ECG abnormalities
- Clinical diagnosis?
- What other ECG abnormalities could possibly be present in this condition?
- Name the bedside confirmatory test for the clinical diagnosis?
- How to manage the patient?

Answers

- Name the CXR abnormalities
  - Globular heart shape
  - Hyperinflated lungs
  - Blunted left costophrenic angle

Answers

- Name the ECG abnormalities
  - Low voltage in both limb & precordial leads
    - Amplitude of QRS complexes in limb leads <5mm
    - Amplitude of QRS complexes in precordial leads <10mm
  - Flattened T wave

Answers

- Clinical diagnosis?
  - Pericardial effusion

Answers

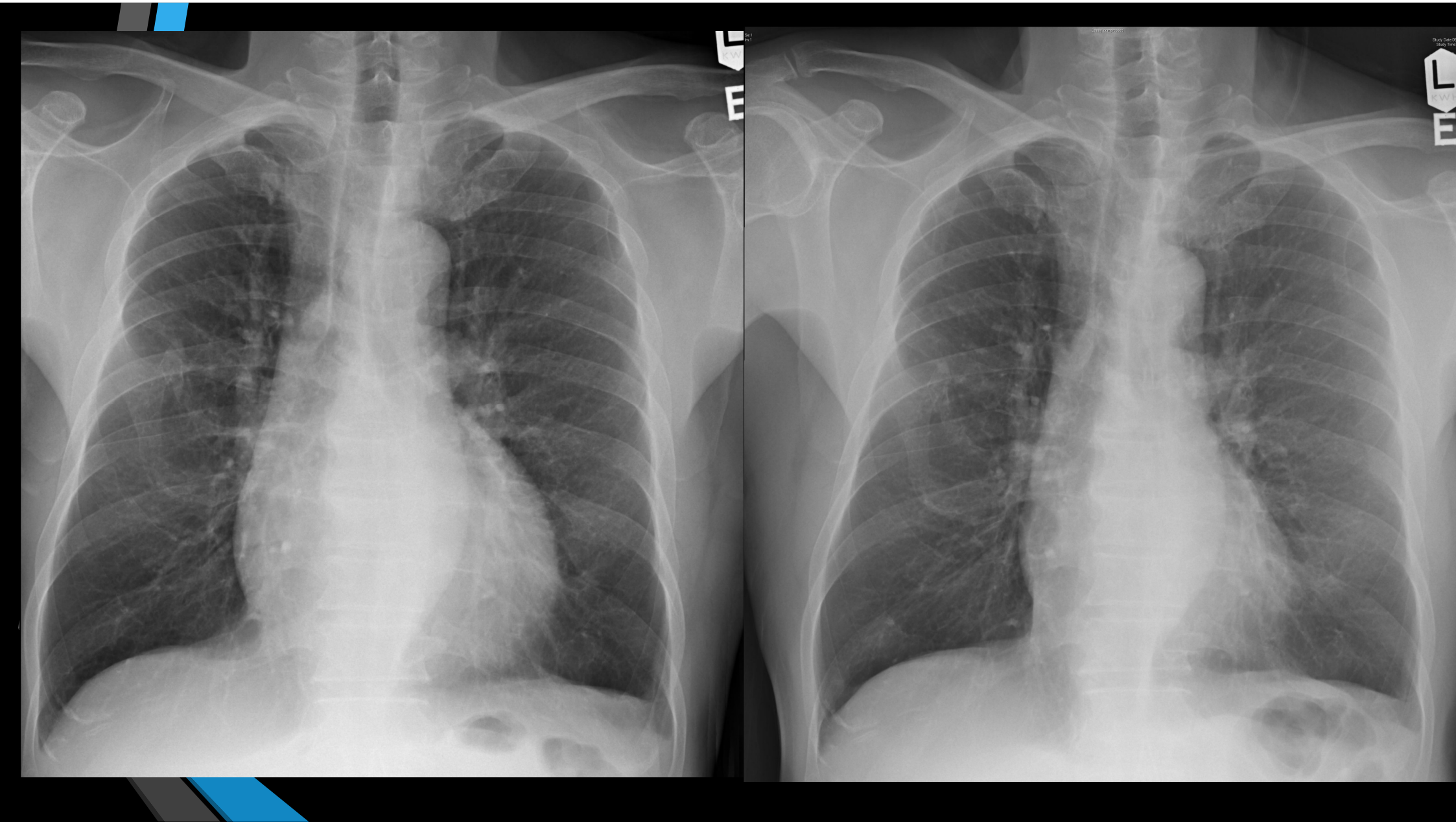
- What other ECG abnormalities could possibly be present in this condition?
  - Tachycardia
  - Electrical alternans: alternation of QRS complex amplitude or axis between beats

Answers

- Name the bedside confirmatory test for the clinical diagnosis?
  - Transthoracic echocardiogram

Answers

- How to manage the patient?
  - No urgent treatment if not having cardiac tamponade
  - Airway
  - Breathing: oxygen, cautious if use PPV
  - Circulation: volume expansion, inotrope, pericardiocentesis
  - Treat underlying cause
    - In this case: hypothyroidism associated pericardial effusion
    - Poor drug compliance to T_4 replacement

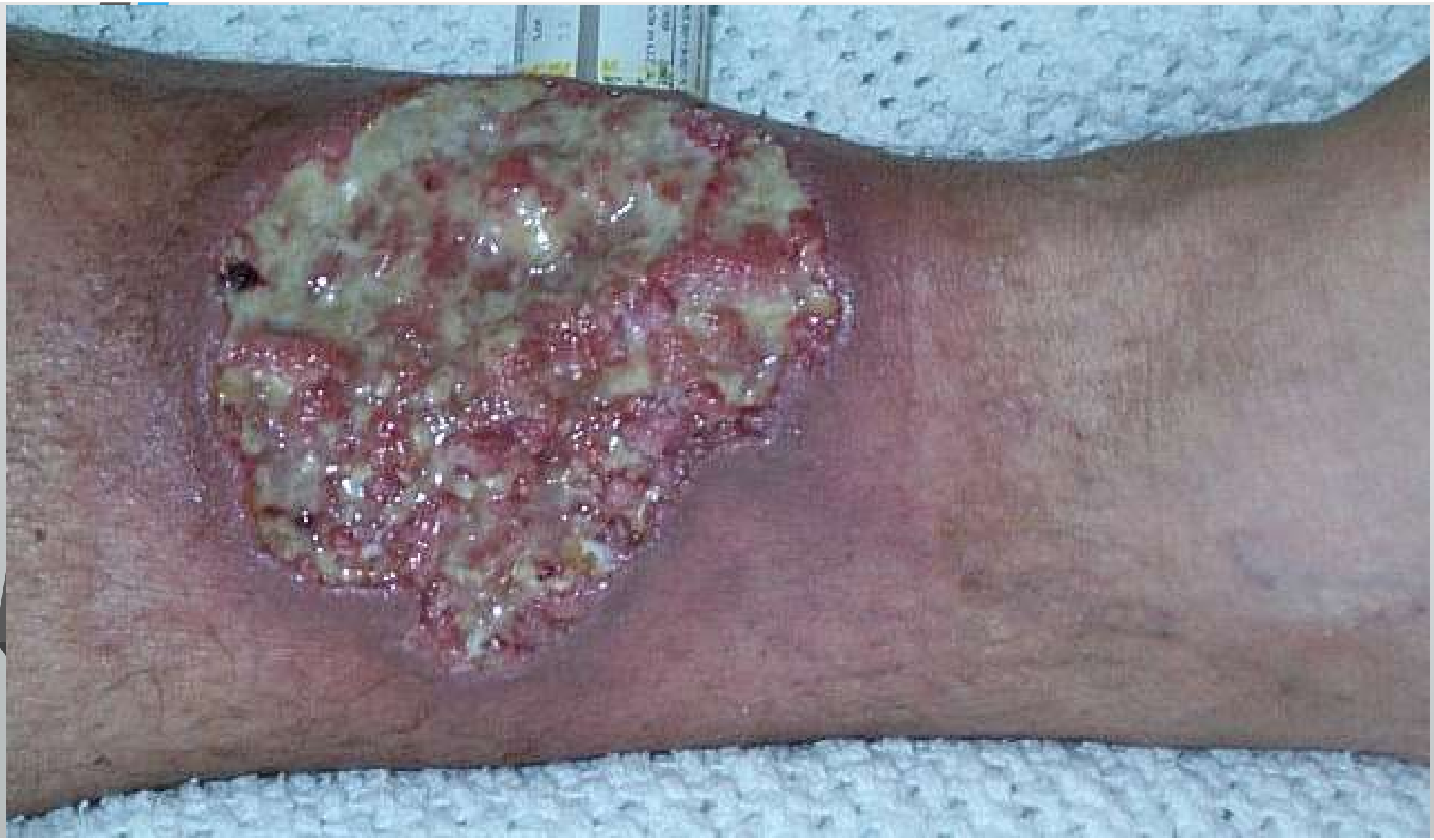


Case 3

- M/43
- NSND
- PHx: Crohn's disease FU medical GI
- Left leg lesion x 3/12, started off as small papule
- No trauma history
- Denied drug abuse
- Seen in A&E for several times, wound swab negative x 3 times, not much improved with multiple courses of antibiotics

Case 3

- Physical exam
  - Afebrile
  - Strong peripheral pulses, warm extremities, normal capillary refill
  - Minimal varicose vein
  - Distal sensation normal
  - Clinical picture in next slide



Questions

- Describe the lesion
- Differential diagnoses?
- What is the provisional diagnosis in this patient?
- What is the importance of recognizing this condition?
- Investigations?
- Management?

Answers

- Describe the lesion
  - Roundish ulcer at left lower shin
  - Bluish / violaceous ulcer edge
  - Necrotic & purulent base

Answers

- Differential diagnoses of leg ulcers
  - Venous insufficiency
  - Arterial insufficiency
  - Neuropathy e.g. diabetic, alcohol abuse, spinal cord disorders
  - Physical trauma
  - Infection
  - Malignancy
  - Pyoderma gangrenosum
  - Vasculitis
  - Panniculitis

Answers

- What is the provisional diagnosis in this patient?
  - Pyoderma gangrenosum
    - An uncommon neutrophilic dermatosis that presents as an inflammatory and ulcerative disorder of the skin
    - Most common presentation of PG is an inflammatory papule or pustule that progresses to a painful ulcer with a violaceous undermined border and a purulent base

Answers

- What is the importance of recognizing this condition?
  - >50% of patients with PG develop the disorder in association with an underlying systemic disease
  - Associated disorders
    - IBD (11-34%)
    - Hematologic disorders or hematologic malignancies (20%)
      - Most common is IgA monoclonal gammopathy
      - Myeloma, leukemia, myelodysplasia, lymphoma, and polycythemia vera
    - Arthropathies (11-25%) e.g. RA, ankylosing spondylitis
    - Other rarer associations: SLE, thyroid disease, solid organ cancers, sarcoidosis, etc.

Answers

- What is the importance of recognizing this condition?
  - PG may precede or follow the diagnosis of an associated disorder
  - May or may not parallel the clinical course of the associated disease
  - Investigate for associated disorders in previously healthy patients when PG is diagnosed

Answers

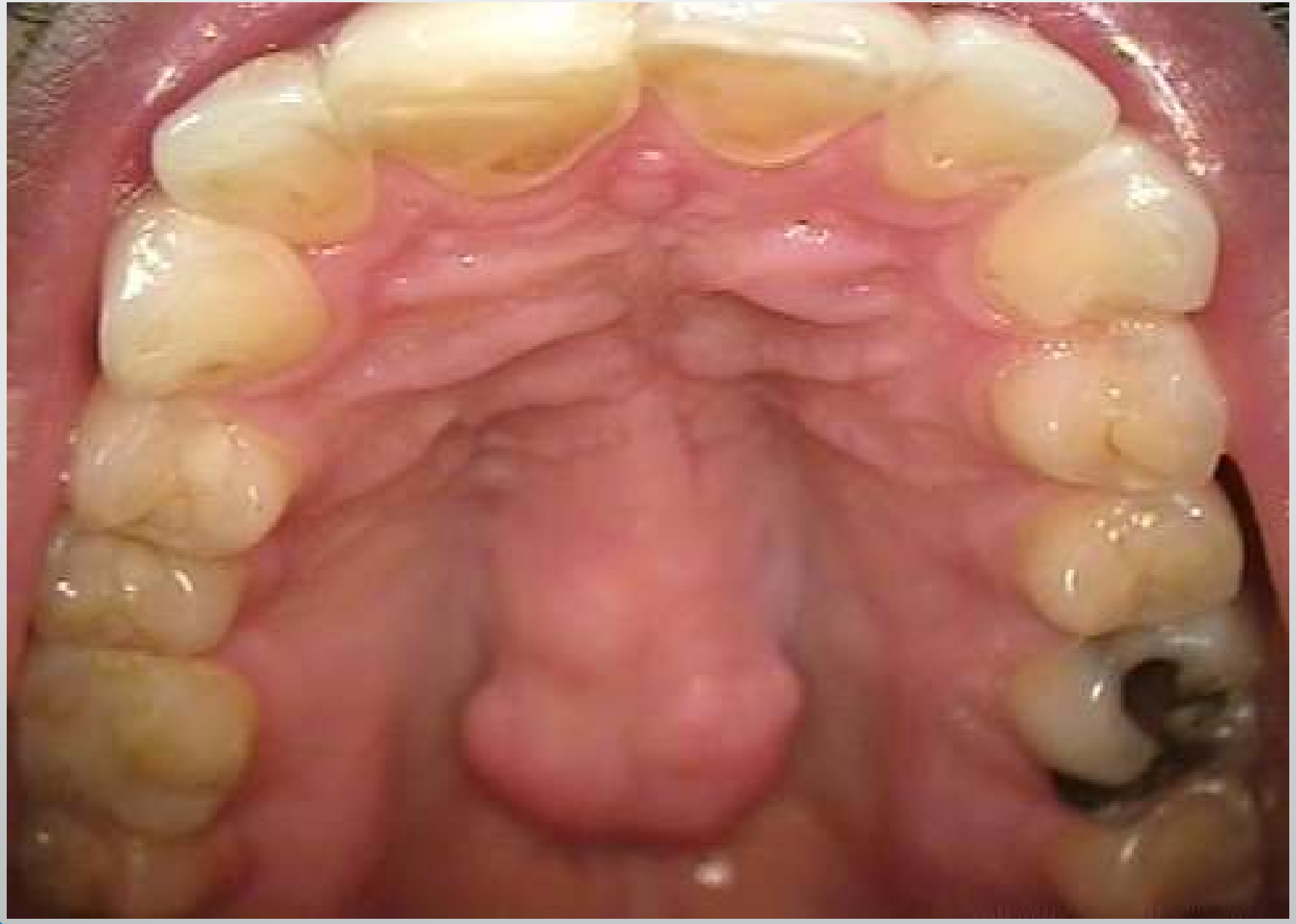
- Investigations
  - Wound swab x C/ST
  - Skin biopsy
  - CBC: hematological disorder
  - LRFT, RG: before starting systemic corticosteroid or immunosuppressive agents
  - ANA: SLE, collagen vascular disorder
  - RF: rheumatoid arthritis
  - Hepatitis serology: before starting corticosteroid / immunomodulatory therapy
  - Colonoscopy: inflammatory bowel disease

Answers

- Management
  - Wound care
  - Refer to specialist
    - Mild disease: high potency topical corticosteroid, topical tacrolimus
    - Severe disease: systemic corticosteroid, cyclosporine, infliximab, etc.

Case 4

- M/53
- Chronic smoker & chronic drinker
- Cough, RN, sore throat x 3/7
- Seen by GP, referred to A&E for a mass at palate found during throat examination
- P/E
  - Clinical picture in next slide
  - Bony hard
  - Non-tender
  - No contact bleeding



Questions

- What is the clinical diagnosis?
- Indications for referral to specialist?
- Managements?

Answers

- What is the clinical diagnosis?
  - Torus palatinus
  - An exostosis located on the midline of the hard palate
  - Presents as a bony hard, nodular, lobular, or spindle-shaped mass covered with normal mucosa
  - Appears during childhood, enlarges slowly over many years, and is asymptomatic
  - Typically an incidental finding during routine physical examination

Answers

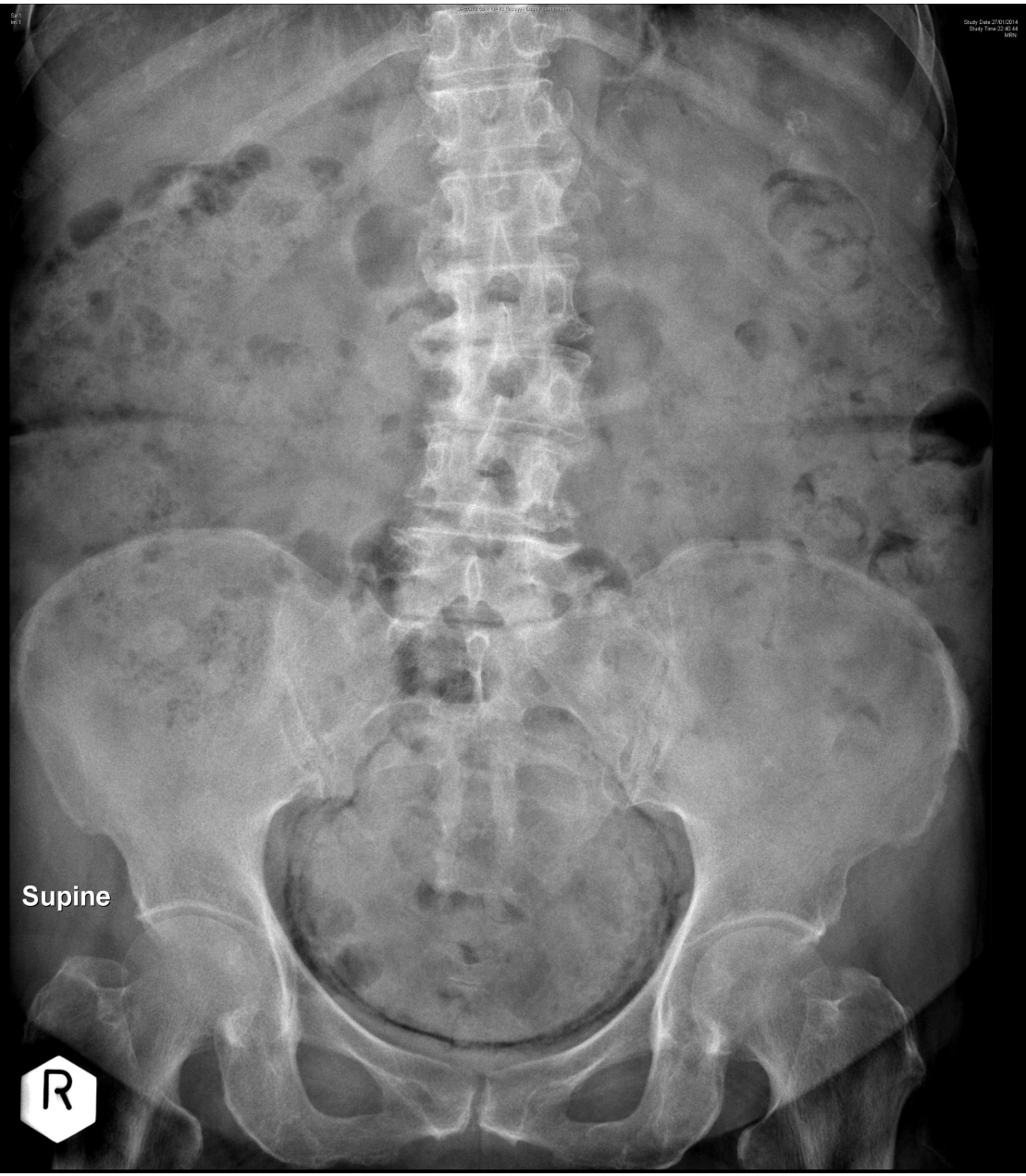
- Indications for referral to specialist?
  - Rapidly enlarging
  - Not located at midline
  - Atypical appearance
  - With contact bleeding, ulcer, purulent discharge, necrosis, etc

Answers

- Managements?
  - Reassurance + observation in general
  - Surgical removal if
    - Precludes proper fitting of dentures or prosthetic devices
    - Frequent trauma (large lesion)
    - Speech disturbance

Case 5

- F/70
- PHx: DM on insulin, HT
- Dysuria, hematuria & urinary frequency x 3/7
- Temp 37.7°C, BP 142/88, P96
- Abdomen soft, slight suprapubic tenderness, no loin tenderness
- Random H'stix: 13.7
- Urine multistix: RBC+++, WBC+++, Nitrite+
- KUB


Supine
R

Questions

- Diagnosis?
- Frequently associated microorganisms?
- Management?

Answers

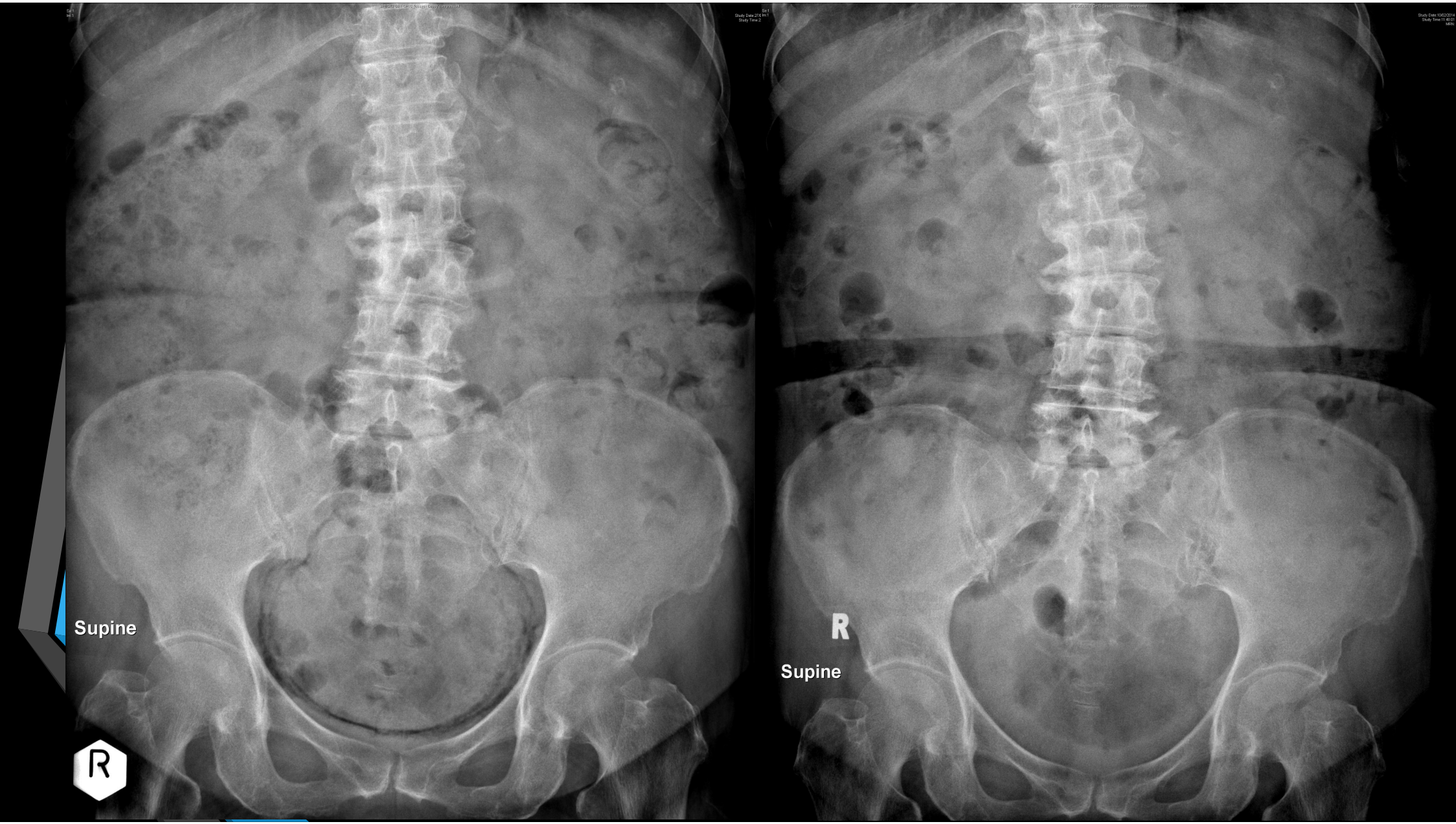
- Diagnosis?
  - Emphysematous cystitis
    - An uncommon and complicated UTI characterized by gas formation in the bladder
    - Associated with DM and other conditions such as diverticulitis, Crohn' s disease and carcinoma of the rectosigmoid colon as these are related to fistula formation
    - F:M = 2:1
    - Fermentation of glucose by bacteria via various pathways results in CO_2 production inside the urinary bladder

Answers

- Frequently associated microorganisms?
  - E. coli, Klebsiella and Enterobacter
  - Clostridium, Pseudomonas, Proteus, Streptococcus, Enterococcus

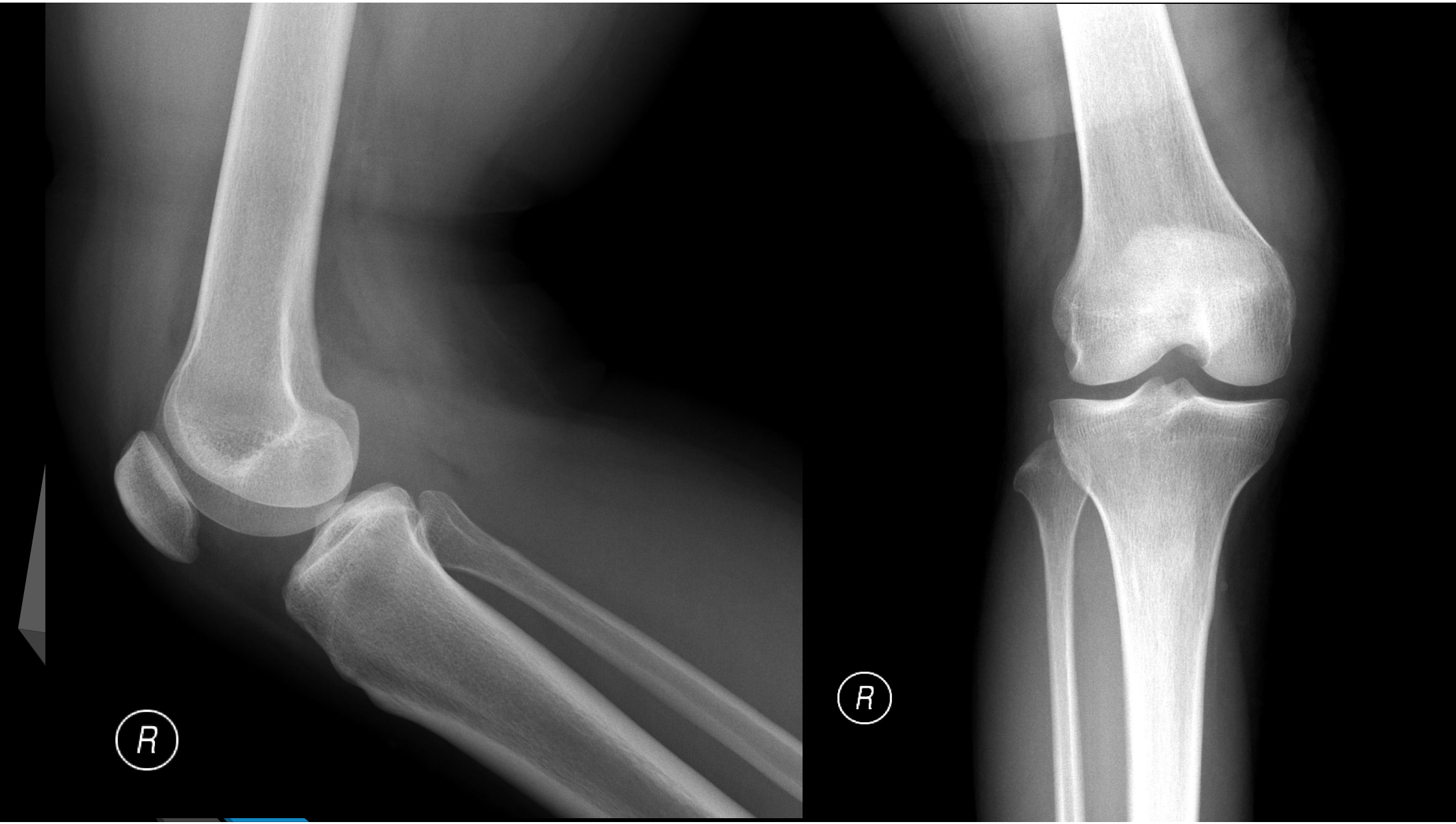
Answers

- Management?
  - Admission
    - Overall mortality quoted as 7%
  - Bladder drainage
  - Antibiotics
  - Optimize DM control → decrease glycosuria → decrease the substrate for fermentation and gas production


Supine
R
Supine

Case 6

- F/22
- Hip hop dancer
- Fell from upper deck of bed at home 3/7 ago
- Twisted right knee
- Seen by a bonesetter with x-ray taken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Questions

- Diagnosis?
- Important clinical tests for the patient?
- Associated injuries?
- Further investigation?
- A&E management?

Answers

- Diagnosis?
  - Segond fracture: avulsion fracture of lateral aspect of the tibial plateau

Answers

- Important clinical tests for the patient?
  - Lachman test +ve
  - Anterior drawer test +ve
  - Varus test -ve
  - Valgus tests +ve

Answers

- Associated injuries?
  - ACL tear
  - Collateral ligament tear
  - Meniscal tear

Answers

- Further investigation?
  - MRI
    - ACL tear
    - Medial meniscus posterior horn focal truncation
    - Medial collateral ligament tear

Answers

- A&E management?
  - RICE
  - Analgesia
  - Refer O&T

End