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<th><strong>Title</strong></th>
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<tr>
<td><strong>Citation</strong></td>
<td>Bmj (Clinical Research Ed.), 2011, v. 342, p. d773</td>
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<tr>
<td><strong>Issued Date</strong></td>
<td>2011</td>
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<tr>
<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/10722/139923">http://hdl.handle.net/10722/139923</a></td>
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A man with hypophosphataemia

A 76 year old man was referred with hypophosphataemia. He had a history of hypertension and gout. He presented with a six month history of generalised bone pain and lower limb weakness. Examination showed weak hip flexion and extension (power 4/5). Complete blood count, serum glucose, and kidney function tests were normal. Serum calcium was 2.33 mmol/L (normal 2.10-2.60), serum phosphate was 0.49 mmol/L (0.8-1.4), and alkaline phosphatase was 204 U/L (47-124). He had no family history of hypophosphataemia or bone disorders. Parathyroid hormone (PTH) was within the normal range (53 ng/L; normal 11-54). Serum calcidiol was low at 38 nmol/L (50-250), and serum calcitriol was also low at 26.8 pmol/L (65.3-171.9). Maximal tubular reabsorption of phosphate was 0.44-0.49 mmol/L (0.9-1.35). A skeletal survey (radiographs including posteroanterior view of the chest; anteroposterior and lateral views of the whole spine, humeruses, and femora; anteroposterior and lateral views of the skull; and anteroposterior view of the pelvis) showed no evidence of fracture or lytic lesion. Technetium-99m-methylene diphosphonate bone scintigraphy showed multiple hot spots over rib cage, involving the costochondral and costovertebral junctions. He was treated with phosphate 500 mg twice daily and calcitriol 0.25 µg daily.

1. What is the most likely diagnosis?
2. How would you investigate and confirm your diagnosis?
3. What is the pathophysiological basis of this condition?
4. What is the treatment of choice?

Submitted by J Lam, C W Lam, Annie W C Kung, Kathryn C B Tan, K S Lau, and Karen S L Lam
Cite this as: BMJ 2011;342:d773

A 42 year old white man was concerned about a recent change in the appearance of his eyes. He was referred to the outpatient clinic for evaluation and treatment. He reported weight loss of more than 15 kg during the preceding six months, even though his appetite had been good. He was a smoker. Apart from alopecia universalis since childhood, he did not report any other significant medical history, and he was not taking any medication.

On examination he appeared restless. His body weight was 98 kg and height 168 cm. He was afibrile, with a resting tachycardia of 100 beats/min, and his blood pressure was 140/80 mm Hg. His skin was moist and warm, and there was fine tremor of the outstretched hands. He had marked bilateral exophthalmos associated with swelling and erythema of the eyelids and redness of the conjunctivae, as well as punctate keratopathy (corneal epithelial erosions). His eye movements were restricted, particularly upward gaze. His thyroid gland was diffusely enlarged with no tenderness on palpation.

1. What is the diagnosis on the basis of the clinical information provided?
2. What further investigations would you request?
3. What is the appropriate initial management of this condition?
4. How should the patient’s eye disease be managed?

A 42 year old man with bilateral exophthalmos and weight loss

Submitted by J Lam, C W Lam, Annie W C Kung, Kathryn C B Tan, K S Lau, and Karen S L Lam
Cite this as: BMJ 2011;342:d773

Risk factors for stroke

This week’s question is on risk factors for stroke and is taken from the onExamination revision questions for the MRCGP exam. A 78 year old male patient mentions to you, in passing, that he is worried he might have a stroke. Which of the following is the single, strongest risk factor for developing a stroke?

A  Diabetes mellitus
B  Hypertension
C  Hypercholesterolaemia
D  Rheumatoid arthritis
E  Smoking

Submitted by Stelios Tigas and Agathocles Tsatsoulis
Cite this as: BMJ 2011;342:d1105

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