Trousseau's sign at the emergency department

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DESCRIPTION

A 83-year-old woman presented with malaise, diarrhoea and cramps and tingling in arms and legs. Her medical history noted hypertension, hypercholesterolaemia, arthrosis of her knee and treatment of an upper airway tract infection with antibiotics 1 month ago.

Physical examination revealed a clear Trousseau's sign (video 1), which is a carpopedal spasm induced by ischaemia through inflation of a sphygmomanometer cuff to a suprasystolic blood pressure. Trousseau's sign emerged at 25 s after the start of cuff inflation, with a maximal spasm at 60 s. Its reported sensitivity and specificity for hypocalcaemia are 94% and 99%, respectively.¹ Indeed, her total calcium level was 4.8 mg per decilitre (normal range, 8.4–10.2), and her free calcium level was 1.32 mEq per litre (normal range 2.20–2.60). Vitamin D was deficient at 8 ng per millilitre (normal range >36) and parathyroid hormone level was slightly raised to 89 pg per millilitre (normal range 12–62).

In contrast, to a previous reported video case, Chvostek's sign was not clinically present.¹ This may be explained by different causes of hypocalcaemia between both cases (ie, vitamin D deficiency vs postsurgically acquired hypoparathyroidism) or by the fact the Chvostek's sign is absent in about one-third of patients with hypocalcaemia.¹

Her cramps and tingling resolved with intravenous suppletion of calcium gluconate. She started oral vitamin D and calcium suppletion.

In addition, she had low magnesium and potassium levels, acute kidney injury and faeces analysis tested positive for clostridium difficile. She was treated with intravenous electrolyte substitution,

Video 1 Trousseau's sign.

fluids and metronidazole. During admission she developed melaena and gastroscopy showed a gastric tumour. She did not want further evaluation and was discharged with appropriate care.

Learning points

- ▶ This video is an excellent image of Trousseau's sign.
- ▶ Trousseau's sign is caused by hypocalcaemia.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCE

- 1 Jesus JE, Landry A. Images in clinical medicine. Chvostek's and Trousseau's signs. *N Engl J Med* 2012;367:e15.

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