

Letters to the editor

OVERVIEW

Please submit letters for the editor's consideration within 3 weeks of receipt of *Clinical Medicine*. Letters should ideally be limited to 350 words, and sent by email to: clinicalmedicine@rcplondon.ac.uk

Splenic injuries

Editor – I read with interest the case report by Carey and Nelatu titled 'Spontaneous splenic rupture secondary to dabigatran: the last in a series of unfortunate events' and postulate whether the splenic rupture was truly spontaneous or acute deterioration of an occult splenic injury sustained during the fall and worsened by direct oral anticoagulation (DOAC) therapy.

Blunt splenic trauma is common after falls¹ and is usually elicited by history and examination, however, a negative history and unremarkable physical examination does not exclude splenic injury.² For this reason, evaluation of the trauma patient should use focused assessment with sonography in trauma examination and computed tomography to assess the spleen.

The American Association for the Surgery of Trauma classifies splenic injuries as grade I–V; with I representing a subcapsular hematoma involving less than 10% of the surface area or capsular laceration less than one centimeter in depth.³ Furthermore, in a multi-center cohort study, bleeding of a subcapsular hematoma occurred in 5% of non-operatively managed patients with splenic injury 4 days post diagnosis.⁴ Therefore, it's difficult to classify a patient as having spontaneous splenic rupture secondary to DOAC, without confidently excluding occult splenic injury or subcapsular hematoma in an elderly patient with a mechanism of fall significant enough to cause bimalleolar ankle fracture. ■

EAMON P MCCARRON

Specialty doctor in general medicine, South West Acute Hospital, Enniskillen, Northern Ireland, UK

References

- 1 Brady RR, Bandari M, Kerssens JJ *et al*. Splenic trauma in Scotland: demographics and outcomes. *World J Surg* 2007;31:2111.
- 2 Salim A, Sangthong B, Martin M *et al*. Whole body imaging in blunt multisystem trauma patients without obvious signs of injury: results of a prospective study. *Arch Surg* 2006;141:468.
- 3 Tinkoff G, Esposito TJ, Reed J *et al*. American Association for the Surgery of Trauma organ injury scale I: spleen, liver, and kidney, validation based on the National Trauma Data Bank. *J Am Coll Surg* 2008;207:646.
- 4 Cogbill TH, Moore EE, Jurkovich GJ *et al*. Non-operative management of blunt splenic trauma: a multicenter experience. *J Trauma* 1989;29:1312–7.

Subarachnoid haemorrhage

Editor – We read with interest the comprehensive article 'Assessment of acute headache in adults – what the general physician needs to know'.¹

The authors highlight that a minority of thunderclap headaches are secondary to a non-traumatic subarachnoid haemorrhage (SAH) and refer to a study showing that in routine practice up to 20% of SAH cases may be missed by computed tomography (CT) scan, without stipulating scanning parameters and then recommending cerebrospinal fluid (CSF) xanthochromia.^{1,2} In this retrospective study the diagnosis of SAH was made on clinical grounds plus the presence of CSF red blood cells.² Only four of the 11 cases missed by CT scan were imaged by modern 64 slice technology, in none of these was xanthochromia detected and only two had a vascular cause for SAH identified by angiography. The authors acknowledge that the high prevalence of aneurysms means that aneurysm identification may be incidental if the CT has not confirmed a recent bleed. Additionally, the presence of xanthochromia in the CSF is not specific to SAH.

A systematic review and meta-analysis concluded that the pretest probability for SAH has to be high to make lumbar puncture worthwhile,³ estimating the number of patients needing a lumbar puncture to identify one aneurysmal SAH amenable to treatment at anything from 250 to infinity. Though the risks are small, lumbar puncture is associated with minor morbidity (eg headache) and major morbidity (eg CSF infection, herniation). Samples for xanthochromia analysis are commonly rejected by laboratories (eg not protected from light) or uninterpretable (eg fresh blood from a traumatic tap interfering with bilirubin detection) and hospital admission is prolonged whilst results are awaited. We would therefore like to highlight the limited role of lumbar puncture over CT alone, dependant on scanning parameters, in the exclusion of SAH. However as the authors state, although aneurysmal SAH is a rare cause of headache, lumbar puncture may enable other diagnoses. Consider carefully the requirement for lumbar puncture to rule out SAH in those having been imaged by a third generation or above CT scanner with appropriately sensitive settings with a low pretest probability of a subarachnoid haemorrhage. ■

KATE E SHIPMAN

Consultant chemical pathologist, Western Sussex NHS Foundation Trust, Chichester, UK

SATHEESH K RAMALINGAM

Consultant neuroradiologist, University Hospital Birmingham, Birmingham, UK

CHARLOTTE H DAWSON

Metabolic medicine consultant, University Hospital Birmingham, Birmingham, UK

ZHAINAB A YASEAR

General medicine trainee, University Hospital Birmingham,
Birmingham, UK

References

- 1 Chinthapalli K, Logan A, Raj R, Nirmalanathan N. Assessment of acute headache in adults – what the general physician needs to know. *Clin Med* 2018;18:422–427.
- 2 Mark DG, Hung Y-Y, Offerman SR *et al.* Nontraumatic subarachnoid hemorrhage in the setting of negative cranial computed tomography results: external validation of a clinical and imaging prediction rule. *Ann Emerg Med* 2013;62:1–10.e1.
- 3 Carpenter CR, Hussain AM, Ward MJ *et al.* Spontaneous subarachnoid hemorrhage: a systematic review and meta-analysis describing the diagnostic accuracy of history, physical exam, imaging, and lumbar puncture with an exploration of test thresholds. *Acad Emerg Med* 2016;23:963–1003.

Response

We thank Kate Shipman, Satheesh Ramalingam, Charlotte Dawson and Zhainab Yasear for their comments and recognise there is ongoing debate regarding the additional benefit of the traditional CT-lumbar puncture (LP) algorithm vs CT alone in excluding subarachnoid haemorrhage.¹

We agree that CT pick up of subarachnoid haemorrhage has improved significantly. It is however important to emphasise that studies reporting near 100% sensitivity and specificity were with CT performed within 6 hours of onset. In one recent UK study in routine practice, only ~10% of patients were imaged within this timeframe.² Sensitivity falls with increasing delay to presentation and the importance of considering lumbar puncture correspondingly increases. Furthermore, detection of subarachnoid haemorrhage on CT imaging remains operator dependent. In routine practice, scans are generally not reported by an experienced neuroradiologist as in the majority of the published studies but rather by a trainee general radiologist, often out of hours.

We would therefore strongly caution against false reassurance from a negative CT report in a patient with a suggestive clinical history, particularly with a delayed presentation. It is for this reason that major international guidelines^{3,4} continue to recommend CT/LP in cases with high clinical suspicion. However, we entirely agree that pre-test probability should always be carefully considered in evaluating the need for lumbar puncture after CT. Ease of access to CT has resulted in increasing numbers of patients being scanned without adequate phenotyping of the presenting headache. Subsequent rote application of guidelines in patients in whom SAH was in any case clinically unlikely pre-CT unfortunately results in too many unnecessary lumbar punctures being performed. ■

KRISHNA CHINTHAPALLI

Neurology specialty trainee, St George's Hospital, London, UK

NIRANJANAN NIRMALANANTHAN

Consultant neurologist, St George's Hospital, London, UK

References

- 1 Lansley J, Selai C, Krishnan AS *et al.* Subarachnoid haemorrhage guidelines and clinical practice: a cross-sectional study of emergency department consultants' and neurospecialists' views and risk tolerances. *BMJ Open* 2016;6:e012357.

- 2 Martin SC, Teo MK, Young AM *et al.* Defending a traditional practice in the modern era: the use of lumbar puncture in the investigation of subarachnoid haemorrhage. *Br J Neurosurg* 2015;29:799–803.
- 3 Connolly ES Jr, AA Rabinstein, Carhuapoma JR *et al.* Guidelines for the management of aneurysmal subarachnoid hemorrhage: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke* 2012;43:1711–37.
- 4 Steiner T, Juvela S, Unterberg A *et al.* European Stroke Organisation guidelines for the management of intracranial aneurysms and subarachnoid haemorrhage. *Cerebrovasc Dis* 2013;35:93–112.

Mis-attribution of ectopic corticotropin-releasing hormone secretion (causing eutopic secondary adrenocorticotrophic hormone secretion) to ectopic adrenocorticotrophic hormone secretion?

Editor – In their Lesson-of-the month,¹ Kleinig and Russell describe a case of adrenocorticotrophic hormone (ACTH)-dependent Cushing's syndrome, which they have ascribed to a metastatic small cell neuroendocrine carcinoma, presumed to have arisen through de-differentiation of a prostate adenocarcinoma. They describe this as a case of 'ectopic ACTH secretion' both in the abstract and repeatedly in the main body of text. However, the complete absence of any ACTH labelling in tumour tissue points towards this description being both inaccurate and misleading. In the absence of tumour-ACTH immunostaining, the actual ectopic hormone secreted was almost certainly corticotropin-releasing hormone (CRH), with ACTH being secreted eutopically in the pituitary gland. Lois *et al* reviewed the literature and identified no convincing case of directly-secreted ectopic ACTH (as opposed to CRH) secretion by prostate adenocarcinomas.² Although the authors had no access to a CRH serum assay, nor CRH tissue immunolabelling, ectopic CRH secretion could easily have been confirmed at autopsy through demonstration of corticotroph cell hyperplasia by ACTH immunostaining of the pituitary gland itself. ■

RICHARD QUINTON

Consultant endocrinologist, Institute of Genetic Medicine,
Newcastle upon Tyne Hospitals, Newcastle upon Tyne, UK

References

- 1 Kleinig P, Russell P. An unusual case of depression in an older man: Cushing's syndrome arising from metastatic small cell carcinoma of the prostate. *Clin Med* 2018;5:432–4.
- 2 Lois K, Santhakumar A, Vaikkakara S, Mathew S, Long A, Johnson SJ *et al.* Pheochromocytoma and ACTH-dependent Cushing's syndrome: tumour CRH-secretion can mimic pituitary Cushing's disease. *Clin Endocrinol (Oxf)*. 2016;84:177–84.

Response

We would like to thank Dr Quinton for his thoughtful and precise response to our case report. The possibility of our patient's Cushing's syndrome being secondary to CRH secretion is recognised and accepted. The dominant histology, however, of both the pelvic mass and metastatic lesions were of a small cell neuroendocrine tumour rather than adenocarcinoma. Prostate specific antigen level was normal, suggesting a quiescent adenocarcinoma component. When considering the possibility of CRH secretion, we reviewed the literature and found only one case of small cell cancer of the prostate releasing CRH,¹ as opposed