Fig 1. A flowchart of the step-wise detection of PAF in suspected cardio-embolic stroke patients. AF = atrial fibrillation; ECG = electrocardiogram; PAF = paroxysmal atrial fibrillation; STAF = Score for the Targeting of Atrila Fibrillation

5 Jabaudon D, Sztajzel J, Sievert K, Landis T, Sztajzel R. Usefulness of ambulatory 7-day ECG monitoring for the detection of atrial fibrillation and flutter after acute stroke and transient ischemic attack. *Stroke* 2004;35:1647–51.

Getting to the heart of hypopituitarism

Editor – In the reported case of the association of panhypopituitarism, empty sella and pericardial effusion,[1] autoimmune hypophysitis (AH) might have been the underlying basis for all three derangements. Firstly, empty sella may be the eventual outcome of AH.[2,3] Secondly, AH is an example of type 2 autoimmune polyglandular syndrome(APS-2),[4] which is now recognised as sometimes having serositis as a non-endocrine manifestation.[4] In one patient with AH, pericardial effusion was an example of the coexistence of serositis and APS-2.[3] In that 37-year-old woman, serial magnetic resonance imaging studies during 2-year follow-up showed an atrophic pituitary gland with empty sella turcica.[3]

Serositis was exemplified by pericardial effusion (with tamponade) in a 34-year-old woman in whom the endocrine component of APS-2 consisted of the coexistence of primary hypoadrenalism and primary hypothyroidism. Following pericardiocentesis, despite good compliance with hormone replacement therapy, she experienced seven documented recurrences of pericarditis over a period of 28 months,[5] testifying to the observation that serositis may recur after asymptomatic intervals of months or years even in patients treated for endocrine dysfunction.[6] Accordingly, in APS-2 the evolution of serositis does not necessarily parallel the evolution of endocrine dysfunction, and adequacy of replacement therapy does not guarantee freedom from recurrences of serositis. ■

Conflicts of interest

The author has no conflicts of interest to declare.

OSCAR M P JOLOBE
Retired geriatrician, Manchester Medical Society, Manchester, UK

References

1 Martin-Grace J, Ahmed M, Mulvihill N, Feeney N, Crowley RK. Getting to the heart of hypopituitarism. *Clin Med* 2017;17:140–2.
2 Gao H, Gu YY, Qiu MC. Autoimmune hypophysitis may eventually become empty sella. *Neuro Endocrinol Lett* 2013;34:102–6.
3 Parikh A, Ezzat S. Complete anterior pituitary failure and postpartum cardiomyopathy. *Endocr Pract* 2006;12:284–7.
4 Cutolo M. Autoimmune polyendocrine syndromes. *Autoimmun Rev* 2014;13:85–9.
5 Alkaabi JM, Chik CL, Lewanczuk RZ. Pericarditis with cardiac tamponade and addisonian crisis as the presenting features of autoimmune polyglandular syndrome type II: a case series. *Endocr Pract* 2008;14:474–8.
6 Tucker AS, Niblack GD, McLean RH *et al.* Serositis with autoimmune endocrinopathy: clinical and immnogenetic features. *Medicine* 1987;66:138–46.

Imaging in Parkinson's disease

Editor – We are grateful to Pagano *et al* for their compelling review of imaging in Parkinson's disease.[1] The accurate and timely diagnosis of Parkinsonian syndromes is of upmost importance for patients, carers and physicians to allow appropriate treatment, multidisciplinary intervention and precise prognostication. It was unfortunate, however, to find no mention of analysis of the nigrosome complexes on susceptibility-weighted imaging. Damier *et al* described patterns of dopamine-containing neuron loss in five compartments within the substantia nigra, the main of which is nigrosome-1.[2] Maximal cell loss occurs in nigrosome-1 and has been identified as a pathoanatomical correlate of idiopathic Parkinson's disease pathology on susceptibility-weighted 3T magnetic resonance imaging.

Several studies have now demonstrated a high sensitivity and specificity in the diagnosis of idiopathic Parkinson's disease.[3,4] Furthermore, in our experience the analysis of the nigrosome-1 complex on 3.0T susceptibility-weighted imaging sequences instead of DaTSCAN for supplementing clinical diagnosis of tremor-predominant idiopathic Parkinson's disease from essential tremor is of equivalent utility. Its use beyond this indication is still under investigation.

Most centres can now more readily access a 3.0T magnetic resonance imaging scanner than molecular imaging such as DaTSCAN and avoids the risks associated with ionising radiation. Although more evidence is required to establish the full role of susceptibility-weighted imaging in Parkinsonian syndromes, it looks promising as another tool in the diagnostic arsenal of physicians to complement clinical diagnosis. ∎

Conflicts of interest

The authors have no conflicts of interest to declare.

RICHARD J B ELLIS
Neurology registrar, The Walton Centre NHS Foundation Trust, Liverpool, UK

MALCOLM STEIGER
Consultant neurologist, The Walton Centre NHS Foundation Trust, Liverpool, UK

References

1 Damier P, Hirsch EC, Agid Y *et al.* The substantia nigra of the human brain II. Patterns of loss of dopamine-containing neurons in Parkinson's disease. *Brain* 1999;122:1437–48.
2 Goa P, Zhou P-Y, Li G *et al.* Visualisation of nigrosomes-1 in 3T MR susceptibility weighted imaging and its absence in diagnosing Parkinson's disease. *Eur Rev Med Pharmacol Sci* 2015;19:4603–9.
3 Langley J, Huddleston DE, Sedlacik J *et al.* Parkinson's disease-related increase of $T_2{}^*$ weighted hypointensity in substantia nigra pars compacta. *Mov Disord* 2017;32:441–9.

A choroid plexus papilloma manifesting as anorexia nervosa in an adult

The lesson of the month by Singh *et al*, detailing the 18-month diagnostic journey of a patient with a choroid plexus papilloma, is a stark example of diagnostic error attributable in part to the cognitive bias known as 'psych-out error'.[1]

Most diagnostic errors are made in 'intuitive thinking' mode, while using mental shortcuts ('heuristics' or 'biases'). There are currently over 100 cognitive biases described. Some common cognitive biases involved in medical diagnostic error include:[2]

> anchoring – the tendency to focus on salient features in your patient's initial presentation too early in the diagnostic process and failure to reconsider the diagnosis in light of later information
> confirmation bias – the tendency to look for evidence to confirm your diagnosis rather than for evidence to disprove it
> diagnosis momentum – once diagnostic labels are attached to patients, they tend to remain and gather increasing momentum with time, without any additional supporting evidence
> fundamental attribution error – the tendency to be judgemental and blame patients for their illnesses based on their personal circumstances
> psych-out error – patients with mental illness often have comorbid medical conditions overlooked; making a misdiagnosis of mental illness rather than a causative underlying physical condition is a variant of this bias.

The patient in this case[1] seems to have been a victim of a perfect storm of anchoring, fundamental attribution error, confirmation bias, diagnosis momentum and psych-out error – all of which conspired to delay her eventual diagnosis of choroid plexus papilloma. The exhortation to exclude organic causes prior to attributing symptoms to mental illness is an example of a cognitive de-biasing strategy against psych-out error, and other similar strategies exist for the numerous biases involved in diagnostic error.[3] ∎

Conflicts of interest

The author has no conflicts of interest to declare.

SHIVA SREENIVASAN
Consultant in acute medicine, South West Acute Hospital, Enniskillen, Northern Ireland, UK

References

1 Singh P, Khan A, Scott G, Singh E, Jasper M. A choroid pluxus papilloma manifesting as anorexia nervosa in an adult. *Clin Med* 2017;17:183–5.
2 Croskerry P. Achieving quality in clinical decision making: cognitive strategies and detection of bias. *Acad Emerg Med* 2002;9:1184–204.
3 Croskerry P. The importance of cognitive errors in diagnosis and strategies to minimize them. *Acad Med* 2003;78:775–80.