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Reducing demand for computed tomography

Editor – I was interested in the article by Lewis *et al* in July on a nudge intervention aimed at reducing demand for computed tomography (CT).[1] While impressed with the reduction in CT requests, I was surprised by their decision to place the intervention (a message highlighting the radiation risk from the scan) in the report of scans, rather than earlier in the process of ordering a scan. In their discussion they state that 'This approach was preferred to the alternative of delivering the information at the time of deciding to do the scan when it could impact on the efficient delivery of clinical care'. Their subsequent argument that it is difficult to go back to a patient and explain why CT may not be necessary is not entirely convincing.

As most radiology tests in the UK are now ordered electronically, computer physician order entry (CPOE) systems have the ability to display messages during the process of ordering a test. There is also the potential for CPOE systems to calculate individual risk (and display different messages) depending for example on the age of the patient or the number of previous CT they have undergone. It would be interesting to know whether such a system might have an even greater impact in reducing CT ordered, and particularly in younger patients who are at greater risk of cancer from ionising radiation. ■

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The curriculum in general internal medicine

Editor – I note with interest that the current Joint Royal Colleges of Physicians Training Board curriculum in general internal medicine (GIM) is currently being reviewed and consideration is being given to current procedural competencies that are required from GIM registrars.[1]

Currently, trainees must be able to perform abdominal paracentesis, direct current cardioversion and knee aspiration independently. Clinical independence is desirable for central venous cannulation (CVC) and intercostal drain (ICD) insertion for pneumothorax and pleural effusion. Under particular scrutiny will be CVC and ICD insertion and indeed a recent social media discussion from the Royal College of Physicians Trainees Committee generated much discussion surrounding these skills.

There is much regional variation in the frequency GIM trainees perform these procedures and the necessity that a GIM trainee would have to perform them in their local hospitals and deaneries. Some areas require medical trainees to perform both on a regular basis and they would often carry out these procedures for their own patients. Other hospitals have out-of-hours respiratory teams and CVC insertion is supported by anaesthetic and critical care colleagues. The requirement of pleural ultrasound for the insertion of intercostal drains for fluid, as described the British Thoracic Society,[2] further complicates matters. Training in both of these procedures varies and, to my knowledge, no formal training pathway for general medicine registrars exists. Concerns also exist over how ongoing competency should be reviewed and assessed for trainees who may perform these procedures less frequently or not at all.

Internal medicine training replaces core medical training this year.[3] Junior medical trainees are now required to rotate through critical care. This could address some of the training, competency and confidence concerns regarding central venous cannulation early in medical trainees' careers. Bedside ultrasound in medicine and its increasing popularity, alongside formalisation of its training (for example, focused acute medicine ultrasound),[4] will also help. Ultimately, any curriculum change should reflect the requirements of both patients and trainees up and down the country and consideration should not only be given to these varying requirements, but to how trainees can easily acquire and maintain competency in these skills. ■

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Dementia with Lewy bodies

Editor – I read with interest the 'Acute presentation of dementia with Lewy bodies' by Akintade and Pierres in the July edition of

Clinical Medicine.[1] In my own practice I have seen a similar case. A diagnosis of dementia with Lewy bodies (DLB) was suspected based on clinical history, collateral history and clinical examination, previous episodes of delirium, lack of response to treatment of identified causes of delirium and the protracted nature of the delirium. The patient was too unwell to undergo a dopamine transporter scan and the patient was trialled on rivastigmine with an excellent response. The patient was discharged home.

The published case highlights various aspects of the management of delirium. It is worth referring to the recently published Scottish Intercollegiate Guidelines Network (SIGN) guideline for risk reduction and the management of delirium.[2] The recommended tool for detection of delirium is the 4AT based on a comparison of different tools, and the National Institute for Health and Care Excellence (NICE) quality standards for delirium recommend assessing all those at risk newly admitted to hospital or long-term care.[2,3] It is worth noting that the investigation of acute and chronic cognitive impairment differ. For delirium the SIGN guidelines recommend good history, collateral history, clinical examination (including neurological) followed by basic and targeted investigations. The recommendation for computed tomography brain relates to various 'red flags' in the acute situation and for further consideration of brain imaging in the case of non-resolving delirium or where there are features to suggest primary nervous system pathology. Similarly, the NICE guidelines for dementia have clear guidance on assessment and investigation strategy in suspected dementia, which includes recommendations around imaging.[4] Some of the investigations listed in the approach to investigation by Akintade and Pierres, for example, autoantibodies would be appropriate only when a cause for delirium has not been found, the presentation is unusual or when not resolving as was the case for the patient presented. It is also worth emphasising that anti-psychotics would not be recommended first line in the management of delirium unless there is intractable distress, risk of harm to the patient or others and when benefits of these medications outweigh potential harms. Non-pharmacological treatment options should always be implemented first, use of more than one pharmacological agent would not be recommended, and it should be noted that only haloperidol is licensed for use in delirium when used without other drugs that prolong QT interval on electrocardiogram.[2]

I would also like to highlight that it has been increasingly recognised in the literature that in some cases of delirium there may be a diagnostic opportunity for DLB.[5,6] It has been suggested that a delirium-like illness may be a prodrome to a diagnosis of DLB.[7] This presentation by Akintade and Pierres is welcome in that DLB as a differential diagnosis for delirium that fails to resolve or is recurrent is highlighted. ■

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Dementia with Lewy bodies

Editor – Akintade and Pierres provide a useful review of the evaluation of cognitive impairment in their Acute Medical Care (AMC) report in July's *Clinical Medicine*.[1] However, the patient described in their report does not have dementia with Lewy bodies (DLB).

Akintade and Pierres cite the updated Fourth DLB Consensus Consortium criteria.[2] Application of these criteria to the clinical information provided leads to the conclusion that the patient is not presenting acutely with DLB.

Firstly, an essential criterion for a diagnosis of DLB is the presence of a dementia syndrome. The acute nature of the presentation at the time this patient was evaluated is not consistent with the typical durations usually considered necessary in standard diagnostic criteria.[2,3]

Secondly, the patient did not present with any of the core clinical criteria for DLB.[2] The Parkinsonism described was not spontaneous but drug-induced.[1] Fluctuating cognition, recurrent visual hallucinations and rapid eye movement sleep behaviour disorder are not present.

Thirdly, the case report suggests alternative explanations that make a diagnosis of DLB less likely, as noted by the DLB Consortium.[2] Akintade and Pierres report that significant ischaemia in the basal ganglia was noted on both computed tomography and magnetic resonance imaging brain studies.[1] Unfortunately, no images are provided for the reader to review. However, the reported degree of ischaemia confounds the brain dopamine transporter study and reduces confidence in a diagnosis of DLB. Additionally, DLB is reported more often to display both bilateral and uniform dopaminergic loss than Parkinson's disease[4] suggesting that the pattern seen on this patient's study is less consistent with DLB.

Finally, supportive biomarkers in this case for a diagnosis of DLB are conflicting. Absence of medial temporal lobe atrophy is reported but electroencephalogram findings are not consistent with DLB.[2] Reduced uptake on metaiodobenzylguanidine myocardial scintigraphy is increasingly recognised as useful in discriminating DLB from other forms of dementia[2] but is not reported in the current patient.

Overall, therefore, the patient described does not meet the threshold for even a 'possible' diagnosis of DLB based on the current standard criteria.[2] ■