PostScript

LETTERS

Use of adrenaline by junior doctors

The survey reported by Gompels and colleagues showing the incorrect use of adrenaline in anaphylaxis by over 50% of junior doctors reveals sobering but perhaps not startling statistics.[1] Their study serves as an audit reflecting the quality of contemporary medical education in that it compares prevailing practice with established guidelines in the management of a given medical problem. Having spent 18 seamless months as a casualty officer recently and worked in two accident and emergency departments in large cities, I wish to highlight the observation that teaching on anaphylaxis was remarkably cursory in didactic sessions, as well as in the standard cardiorespiratory training workshops. When combined with the reality that moderate to severe anaphylaxis is seen infrequently, it is easy to appreciate how any superficial knowledge that exists passes into further obscurity over time.

The inability to tackle emergencies adequately results from inexperience, but the large gaps in basic medical know-how (in over 50% of graduates in this study) is a direct testament to their undergraduate and early postgraduate training. Medical curricula are ever expanding with concepts that the freshly minted doctor of the 21st century must absorb, but it appears that in this enormous amount of information the crucial elements are becoming indistinguishable.

Since this study is an audit perhaps we ought to "close the loop" by reappraising undergraduate training in earnest, especially now that many medical schools favour the submission of course work in monitoring progress at the exclusion of formal examination strategies. A specific and formal examination structure (perhaps a *viva voce* or written short answer questions) dedicated to the management of emergencies would be a useful adjunct to the traditional emphasis on the detection of signs in relatively stable patients. This arrangement would produce a preregistration doctor who is more confident and less dangerous under the onslaught of acute presentations and better primed for the senior house officer days. This plea for an improvement in our undergraduate and postgraduate education is particularly justified in the context of British medicine, where ironically, at the grassroots, the most junior doctors enter accident and emergency departments to find themselves managing (often independently) patients who are seriously unwell.

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Reference

1 **Gompels LL**, Bethune C, Johnston S L, *et al*. Proposed use of adrenaline (epinephrine) in anaphylaxis and related conditions: a study of senior house officers starting accident and emergency posts. *Postgrad Med J* 2002;**78**:416–18.

Authors' reply

We would like to thank Dr Gandhi for his views on undergraduate and postgraduate training, which I am sure are also a reflection of other people's views as well.

The purpose of our paper was to highlight the difficulties that are experienced in the differential diagnosis of acute anaphylaxis, and the management thereof. This study arose from the perception in our allergy practice that significant numbers of patients were referred who had inappropriate treatment. The purpose of this publication was to promote further education and debate, which hopefully it has achieved.

Chronic unexplained fatigue

I found the editorial on chronic fatigue syndrome by White both surprising and disappointing, because he used the title "Chronic unexplained fatigue" and the subtitle "A riddle wrapped in a mystery inside an enigma", but his editorial, by ignoring very important facts about chronic fatigue syndrome, actually perpetuates that riddle, rather than helping to solve it.[1]

If a puzzling and poorly manageable condition shares more than 40 features, including all of its diagnostic criteria, with a well known and easily treatable disease, this astounding clinical overlap should not be ignored, because reason not only suggests that the mysterious illness may simply be a form of the well known disease, but also hints that it is worthwhile assessing whether the classic therapy for that treatable disease could be effective for the enigmatic condition as well.

It is surprising, therefore, that in White's editorial there is not a single word about the 41 features that chronic fatigue syndrome shares with Addison's disease,[2] including chronic fatigue and all the physical signs and symptoms, neurocognitive dysfunctions, depressive complaints, and sleep disturbances listed in the diagnostic criteria for chronic fatigue syndrome.[3] Nor is there a single word about the endocrine and adrenal abnormalities that chronic fatigue syndrome shares with Addison's disease—namely, hypocortisolism, impaired adrenal cortical function, reduced adrenal gland size, and antibodies against the adrenal gland.[3]

What is really mysterious about chronic fatigue syndrome is the fact that, despite its unequalled clinical overlap with Addison's disease (which, notably, does not necessarily include hyperpigmentation as a presenting feature[3]), no published study tried to determine whether the classic therapy for Addison's disease—that is, hydrocortisone plus fludrocortisone, could also be effective for treating chronic fatigue syndrome. Since both of these steroids, administered separately in low doses[4] and in the proper form,[5] have already been reported to be safe and remarkably beneficial in the treatment of chronic fatigue syndrome,[3] it is even more mysterious that the effects of their combined administration on patients with the syndrome have yet to be investigated.

As someone whose chronic fatigue syndrome symptoms, after their reported dramatic resolution thanks to an old remedy for Addison's disease,[2] are currently suppressed most effectively by low doses of both hydrocortisone and fludrocortisone, I cannot but suggest that chronic fatigue syndrome, far from being "a riddle wrapped in a mystery inside an enigma", is merely a mild form of Addison's disease.

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References

1 **White PD**. Chronic unexplained fatigue. *Postgrad Med J* 2002;**78**:445–6.
2 **Baschetti R**. Chronic fatigue syndrome, decreased exercise capacity, and adrenal insufficiency. *Arch Intern Med* 2001;**161**:1558–9.
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4 **Baschetti R**. Hydrocortisone and chronic fatigue syndrome. *Lancet* 1999;**353**:1618.
5 **Baschetti R**. Orthostatic hypotension and chronic fatigue syndrome. *JAMA* 2001;**285**:1441–2.

Author's reply

I am pleased to learn that Dr Baschetti's "chronic fatigue syndrome symptoms . . ..are currently suppressed most effectively by low doses of both hydrocortisone and fludrocortisone", but I would not share his confidence in this being the answer to treating the syndrome. There is little evidence that chronic fatigue syndrome is "merely a mild form of Addison's disease".

Two systematic reviews (published together) of blindly assessed, randomised controlled trials of these drugs found that fludrocortisone was ineffective and that there was insufficient positive evidence to recommend hydrocortisone.[1] Hydrocortisone caused serious adverse effects in some patients.

Although most studies do find a down-regulated hypothalamic-pituitary-adrenal (HPA) axis in patients with chronic fatigue syndrome, compared with healthy controls,[2] this could be the consequence of the relative inactivity or insomnia that occurs with chronic fatigue syndrome, rather than being a primary event.[3 4] We should also remember that a down-regulated HPA axis is found in many conditions in medicine that have nothing to do with Addison's disease.[4]

References

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3 **White PD**. The role of physical inactivity in the chronic fatigue syndrome. *J Psychosom Res* 2000;**49**:283–4.
4 **Wessely SC**, Sharpe MC, Hotopf M. *Chronic fatigue and its syndromes*. Oxford: Oxford University Press, 1998.