



17 February 2004

Richard Smith  
The Editor  
British Medical Journal

Dear Mr Smith

**Re: Diagnostic confusion surrounds Addison's disease**

Our thanks to Smith, Siddique and Corral for their discussion of the diagnostic confusion which surrounds Addison's disease, especially in cases of atypical presentation<sup>i</sup>.

We would like to remind readers that:

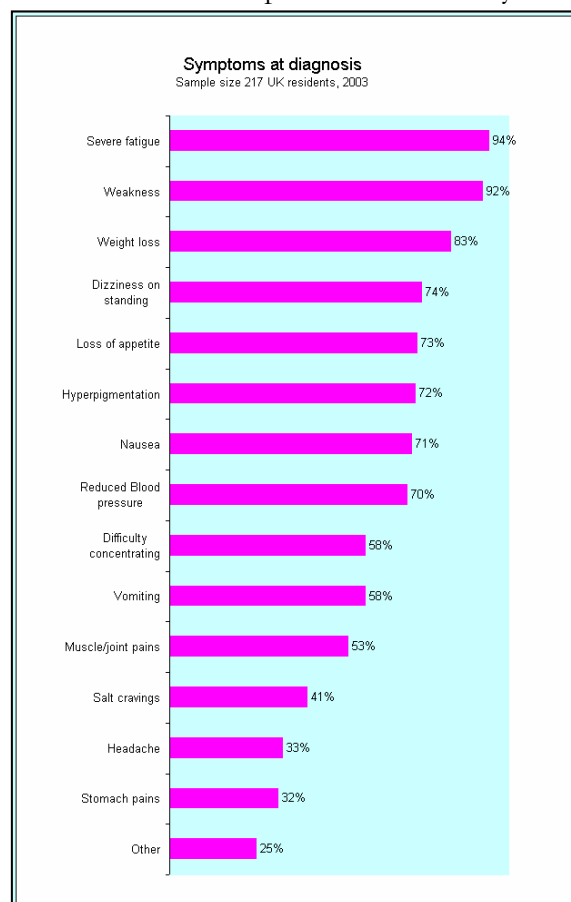
- **An ACTH (synacthen) test is a simple, accurate predictor of adrenal function.**
- **Failure to conduct an ACTH (synacthen) test or begin treatment promptly can be fatal.**
- **Many cases of Addison's disease will present with only a few of the textbook symptoms.**

In 1996 and 1997 the BMJ reported three cases of Addison's disease where failure to diagnose led to the deaths of two young adults and a child.<sup>ii</sup> These cases were summed up by one of the authors: **Addison's disease remains the master of unforgiving disguise.**

In addition to the risks of death, a delayed diagnosis can also result in permanent disability for a previously fit, young adult, due to either the cardiac complications of severe hypovolaemia, or to cerebral oedema. These problems, associated with a delayed diagnosis, have been highlighted by a recent membership survey conducted by the UK Addison's Disease Self-Help Group (ADSHG)<sup>iii</sup>. It is our hope that a higher level of suspicion among medical professionals – particularly among GPs and ICU staff – will reduce these preventable tragedies in future.

The ADSHG's 2003 membership survey includes information about the individual's experiences in getting diagnosed. The key factor for a successful, early diagnosis has been the GP's awareness of the possibility of Addison's disease. One of our new members sums it up: *When I got so weak I couldn't walk up stairs my partner persuaded me to visit the GP. My GP was brilliant. He arranged the relevant tests and I was diagnosed soon after visiting him.*

For the GP, the greatest challenges in early detection of Addison's remain its rarity and the diffuse nature of its symptoms. The GP must



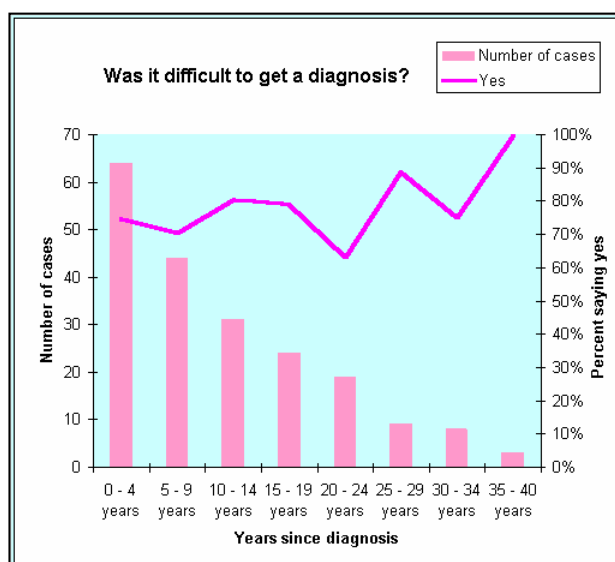


be able to distinguish between the psychological apathy of depression and the physical exhaustion of adrenal failure. In some instances, this is commendably handled. For example, our 2003 survey found that one GP correctly identified Addison's disease in a patient who had been fit enough to go mountain climbing one month earlier.

Few patients will present to their GP with the full complement of textbook symptoms (see chart 1), thus compounding the challenges of diagnosis. The possibility of Addison's is usually identified only after more common causes of extreme fatigue have been excluded.

Nevertheless, the GP can conduct the basic screening tests for Addison's on the spot: a physical examination will almost invariably indicate weight loss with a weak hand-grip strength. If there is also extra pigmentation (a seeming "ski-holiday" tan), with signs of postural hypotension or reduced blood pressure in older patients, then referral for an ACTH (synacthen) test is probably warranted – particularly if blood tests reveal a low sodium level. Arlt and Allolio offer a helpful discussion of the various laboratory tests for adrenal insufficiency.<sup>iv</sup>

Greater awareness of adrenal conditions seems to be leading to an increase in diagnosed cases, and hopefully to a shorter period of pre-diagnosis illness with fewer unnecessary deaths/disabilities (see Chart 2). The most recent research from Norway<sup>v</sup> found that the rate of diagnosed Addison's disease could be as high as 140 per million, which would suggest more than 8,000 possible cases of Addison's disease in the UK. However, MedicAlert had only 2,279 registered members with Addison's disease across the UK in 2003, equivalent to around 38 cases per million total population.



We would like to encourage all GPs to remain alert to the possibility of Addison's in cases of persistent, severe fatigue where there is evidence of weight loss with a weak hand-grip, and extra pigmentation or hypotension.

Yours sincerely,

**Sarah Baker, Alyson Elliott, Deana Kenward, Katherine G White,**  
*on behalf of the Addison's Disease Self-Help Group*

<sup>i</sup> Jamie Smith, H Siddique, R M J Corral, *Lesson of the Week, Misinterpretation of serum cortisol in a patient with hyponatraemia*, **BMJ 2004; 328: 215-216 (24 January)**.

<sup>ii</sup> C M Brosnan and N F C Gowing, *Lesson of the week: Addison's disease*, **BMJ 1996; 312: 1085 – 1087**, Clare Dyer, *News: court rules that doctors do not have to tell parents the truth*, **BMJ 1997; 315: 75 - 80**

<sup>iii</sup> International survey 2003 of Addison's group members in the UK, Australia, Canada, New Zealand. Full results pending; provisional UK data, drawn from 217 Addison's responses, cited in this letter.

<sup>iv</sup> W Arlt W and Allolio B, Adrenal insufficiency, **The Lancet 2003; 361: 1881-93**

<sup>v</sup> Lovas K, Husebye ES, High prevalence and increasing incidence of Addison's disease in western Norway, **Clinical Endocrinology 2002; 56: 787**