population (with MRI data) than in the headache population, and while we agree that it is therefore likely that some of the abnormalities were not relevant, we would argue that some of these abnormalities will be entirely relevant and early neuroimaging may allow earlier diagnosis and earlier treatment.

The small risk of causing harm with ionising radiation should be explained to the patient as it should be prior to any medical exposure to ionising radiation, such as breast screening. We recognise that there is the option of no investigation and no referral that clearly remains an option for primary care physicians.

In this group of patients with a 3-month history of headache, CT is adequate for the detection of symptomatic space occupying lesion. Some of the patients studied had further investigation with MRI, often for assessment of the craniovertebral junction. We recognise the potential option of initial MRI scanning for this group of patients. This would allow a greater sensitivity and avoid any exposure to ionising radiation, although there are clear financial and resource implications that would have to be studied in more depth.

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DOI: 10.3399/bjgp11X561375

# CT and chronic daily headache

We read with interest Simpson *et al*'s paper regarding direct access computerised tomography (CT) for the investigation of chronic daily headache (CDH), and noted their conclusions that important benefits to patients and GPs were demonstrated, through reassurance and potential cost savings.[1] We challenge these conclusions, and suggest that an alternative interpretation might be that brain imaging for CDH is a waste of NHS resources, given the exceedingly low yield of pathology, and may well cause more harm than good.

First, the study provided no evidence that patients were reassured by a normal scan. A randomised controlled trial of imaging in CDH failed to provide evidence that scans are persistently reassurring.[2] Indeed, although intuitively one might expect normal scans to have a therapeutic effect, neurologists and GPs commonly find the opposite — that they can reinforce anxiety and lead to a spiral of requests for further tests. Simpson *et al* do not comment on the 461 patients who were told they had an abnormal scan, and therefore, presumably not reassured, despite the incidental nature of most of the findings.

Second, while the paper emphasises the satisfaction of GPs who used the direct access service, the data were based on a sample of just 33% of questionnaires sent out (incidentally, there is an error on page 899, they quoted 23% but 996/2998 is 33%). The true denominator was 4404, not 2998, so they have extrapolated this unrepresentative small sample to the whole population, which is likely to be biased, and thus unreliable. Indeed, it is not at all clear how this denominator of 2298 was derived. Nor does their study tell us anything about the satisfaction of those who did not use the service, nor of the satisfaction of patients with CDH who were not scanned.

Third, the paper seems to encourage the notion that all patients with CDH merit scanning. We cannot agree with such an indiscriminate approach. Isolated CDH almost never indicates significant intracranial pathology — and adopting a 'scanning for all' policy undermines key aspects of primary care assessment, such as establishing the length of the history and exploring the underlying reason for attendance rather than arranging knee-jerk investigations. It also encourages headache patients to believe they need a scan. Based on their data, there is a 1 in 10 chance of an abnormal result adopting this approach (which is roughly the same frequency as for asymptomatic people, as they noted). Many might dispute their suggestion that the abnormalities in Table 1 were 'likely to be causative' — yet at least 14 of these patients then received significant intervention, sometimes in areas for which there is no evidence at all of benefit (for example, coiling of unruptured aneurysms). While it is not possible to tell from the current study, many might wonder, therefore, whether the alleged benefit (reassurance) is negated by the harm of such uncertain intervention.

Fourth, the cost-effectiveness is much more uncertain than the authors acknowledged, and again is extrapolated from a minority response from GPs. They failed to account for the primary care time required to arrange scans, and to discuss and resolve the results with patients, nor have they factored in the very considerable costs of the interventions, which would quickly offset their suggested savings of almost £90 000.

Our interpretation of their paper would be that there is no evidence that direct access CT for CDH provides benefit, might cause significant harm, is of doubtful cost-effectiveness, and undermines a logical primary care approach to a very common problem. Resources would be better spent educating patients and doctors in the diagnosis and management of CDH, and developing better services for chronic pain.

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