SUBARACHNOID HAEMORRHAGE

Beware adopting rigid rules

Perry and colleagues try to identify high risk clinical characteristics for subarachnoid haemorrhage in neurologically intact patients with acute headache, but we caution against the rigid adoption of clinical decision rules on the basis of their findings.

Firstly, although the hallmark of spontaneous subarachnoid haemorrhage is headache reaching maximal intensity immediately or over a few minutes, the study definition of onset within an hour almost certainly underestimated the importance of this clinical symptom.

Secondly, as recognised by Perry and colleagues, the proposed rules have yet to be evaluated prospectively, and the generalisability of these rules to other healthcare systems, particularly those incorporating arrival by ambulance, is unclear.

Finally, even if these rules are validated prospectively and locally, patients with other serious diseases such as cerebral venous sinus thrombosis or meningitis may also present with an acute headache and may be missed when clinical decision rules to identify patients at risk of subarachnoid haemorrhage alone are applied. Although most other serious causes of headache would have other clinical clues, these may not be apparent in patients presenting early in the course of their disease. Patients in Perry and colleagues’ study presented, on average, almost 9 hours after the onset of headache.

Clinical decision rules to identify patients with an acute headache at risk of subarachnoid haemorrhage would be useful, but clinicians must carefully consider whether patients who do not meet the criteria, particularly if presenting early, nonetheless need to be observed, further investigated, or referred to a neurologist.

Competing interests: None declared.

References


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Clinical gestalt needed

Clinical decision instruments (not rules as they give the impression they must always be followed) are useful for answering simple questions when the instrument is short, easy to remember, and considers unambiguous questions.

If the pre-test probability of a patient with subarachnoid haemorrhage presenting to an emergency department is around 5% then with normal results on computed tomography within 12 hours the post-test probability is around 0.1-0.5%, so 1:200-1:1000. Experts do not consider this a low enough risk not to do a lumbar puncture with a view to further imaging.

The use of angiography is another minefield if computed tomography and lumbar puncture both give normal results. Angiography will detect asymptomatic aneurysms in patients that may not have been the cause of the headache.

Operating on this group of patients exposes them to a risk of neurological injury for a coincidental finding that they may never have known about.

Subarachnoid haemorrhage requires doctors to use clinical gestalt and have a frank discussion with the patient about risks and benefits. It cannot be left to protocols and decision instruments.

Competing interests: None declared.

References


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Ask a neurosurgeon

Perry and colleagues analysed the cases of 1999 patients to try to formulate “a clinical decision rule to rule out subarachnoid haemorrhage” in
patients presenting to emergency departments. 3
Neurosurgeons—the clinicians ultimately dealing with the condition—have an extremely low threshold for investigating patients for subarachnoid haemorrhage. We will investigate, or agree on investigations for, pretty much anyone with a sudden severe headache continuing for more than a few minutes. That’s it. The rest doesn’t really matter—and the idea that someone would not refer a patient because they didn’t arrive in an ambulance, or that the headache didn’t come on with exertion, really doesn’t bear thinking about. Most of the small amount of medicolegal work I do deals with missed subarachnoid haemorrhage, and this paper is guaranteed to increase that.

One or two things are simply wrong: computed tomography should not be preceded by lumbar puncture, for very obvious reasons.

While it may be interesting in retrospect to assess positive diagnostic features, experience shows that these are often absent or confusing. In such a potentially lethal condition the “clinical decision rule” is simple: if you think it might be a subarachnoid haemorrhage, it is worth a scan, and if results are negative, a lumbar puncture. In that order.

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Editor’s note: A correction regarding the order of computed tomography and lumbar puncture has been published to the print version of the paper by Perry and colleagues.


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Author’s reply
Marcus and colleagues are concerned about the time from onset to peak headache. 4 Although most patients with subarachnoid haemorrhage have a rapidly peaking headache, we showed that this is not uniformly true. We therefore opted for a longer time to peak intensity criterion to catch more slowly peaking cases of subarachnoid haemorrhage. We found 14 patients with subarachnoid haemorrhage with onset to peak headache greater than 5 minutes (in 11 cases greater than 15 minutes and in one case 1 hour). Hence, we believe our onset time was appropriate. Our rules are not designed to identify other dangerous causes of headache, but other serious diagnoses were rare in our cohort and had other clinical clues.

Webster suggests clinical decision rules are not appropriate for subarachnoid haemorrhage and points out that indiscriminate cerebral angiography may diagnose asymptomatic aneurysms, which if treated may cause unnecessary morbidity and mortality. 5 We agree with the latter point but believe that a validated clinical decision rule will decrease the number of patients being unnecessarily investigated, and lead to fewer incidental aneurysms being identified and inadvertently operated on. While clinical experience, or gestalt, is important, using clinical decision rules along with experience will improve outcomes.

Lamb is concerned about the patients without both computed tomography and lumbar puncture. 6 This patient population was likely to be less ill, given that treating physicians opted not to investigate, and therefore had a lower risk of subarachnoid haemorrhage. To minimise the risk of misclassification error, we conducted telephone and medical record follow-up after 3 and 6 months to identify missed subarachnoid haemorrhages. To force patients to undergo investigations for the purpose of study is unethical. Hence, we believe that we used the most rigorous method possible and are not likely to have missed any cases of subarachnoid haemorrhage.

Jenkins is concerned about using clinical decision rules and would fully investigate all patients with headache. 7 This may be a sound approach from neurosurgeons, who are referred only high risk patients. Investigating all emergency patients is not current practice. 8,9 With overcrowded emergency departments, it is not practical to fully investigate all patients with headache. Given that over 92% of the tests would yield negative results, it is also arguably not required, with excess costs, radiation exposure, and risks of complications from lumbar puncture. Our clinical decision rule, once validated, will ultimately result in investigating patients with subarachnoid haemorrhage who may otherwise have been missed, while suggesting no investigations for low risk patients. Hence we suggest that using sound research derived and validated clinical decision rules will provide a more sound way to balance the risks and benefits of investigating patients.

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Competing interests: None declared.

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Cite this as: BMJ 2010;341:c7421

EXTRACORPOREAL LIFE SUPPORT

For H1N1 influenza

The number of patients referred for extracorporeal membrane oxygenation (ECMO) to the Heartlink ECMO Centre in Leicester for respiratory failure due to H1N1 influenza recently increased. 2 In the month to 16 December 2010, 29 patients with confirmed H1N1 flu and a further 11 patients with suspected H1N1 flu were referred from across the UK. Of the patients with confirmed H1N1 flu, 10 were pregnant when they developed symptoms. The Health Protection Agency’s weekly national influenza report corroborates this increase. 2

ECMO capacity has been increased in the UK by re-initiation of adult ECMO services at Papworth and the Royal Brompton Hospitals and by the inauguration of adult ECMO capacity at Wythenshawe and Freeman Hospitals. However, the focus should be primary prevention through vaccination and good personal hygiene, and early diagnosis and start of neuroaminidase inhibitor treatment as a result of vigilance and high level of suspicion.

We exhort intensivists to refer patients for consideration of ECMO before seven days of ventilation as the survival rate is reduced dramatically after this time. To discuss a patient with the National Adult ECMO Service please dial 0300 303 1573 and ask for the ECMO coordinator.

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Competition of interest: None declared.

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Cite this as: BM 2010;341:c7391

POSTMENOPAUSAL BLEEDING

Referral rates are not respectable

McBride and colleagues report that referral rates for patients with postmenopausal bleeding ranged from 66.4% in 55-64 year old patients to 40.1% in those over 85.3 We agree with Jiwa’s assertion that this overall referral rate of 64.1% is “unsatisfactory,” but do not think it is “respectable.”

Because postmenopausal bleeding is a cardinal symptom of uterine and cervical cancer, urgent referral is rightly recommended for all women reporting postmenopausal bleeding who are not taking hormone replacement therapy.4

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DRUG RATIONING IN NEW NHS

Return of the postcode lottery

Many of the issues arising from changes to NHS drug pricing in 2014 already apply to the Interim Cancer Drugs Fund.1 The government’s initial pledge of £50m up to April 2011 has been followed by a proposal for an annual fund of £200m. This money has been given to strategic health authorities in England on a per capita basis.

The money is not being allocated uniformly, so a return to postcode prescribing is already obvious. A system that requires individual patient applications for funding favours people with cancers that have a longer natural history such as breast or prostate cancer and disadvantages those with more rapidly growing cancers. Some authorities have developed lists of approved drugs for specific cohorts of patients, but this, too, results in variations in treatments across regions of the country.

The plan to abolish the NHS funding of decisions made by NICE in favour of local decision making will result in even greater inconsistency of treatment across the country. The Department of Health has issued a consultation paper on the Cancer Drugs Fund with a closing date of 19 January 2011.2

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Competing interests: None declared.

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Cite this as: BM 2010;341:c7389

IMAGING THE DEAD

Can supplement but not replace autopsy

Watts’s article asks “Could a routine radiological autopsy service ever be introduced in the UK?”1 Medical dog death investigation is complex, and...
autopsy has a prominent but not exclusive role. At our forensic institution, postmortem computed tomography (PMCT) is routine and forms part of the “preliminary investigation.” It often provides sufficient evidence for coroners to decide that death was natural, obviating the need for further coronial inquiry, including autopsy.

Even if death seems to be unnatural, PMCT findings can be so definitive that autopsy is deemed unnecessary because it is unlikely to provide additional relevant information. In many cases PMCT does not provide a definitive cause of death. Nevertheless, negative findings may in themselves be important. Even in cases undergoing autopsy, PMCT provides complementary information to the pathologist, adding to accuracy of their final report.

Given the complexities of death investigation we believe that postmortem imaging is unlikely to replace autopsy because it cannot answer all the questions of medicolegal consequence in every case. The concept of “radiological” autopsy is therefore flawed and an unreal expectation. The success of advanced postmortem imaging should not be judged on this parameter alone. Routine PMCT can greatly reduce autopsy rates and improve accuracy of diagnosis in cases that do proceed to autopsy.

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Competing interests: None declared.

1 Watts G. Pathology: imaging the dead. BMJ 2010;341:c6600. (22 November.)

Cite this as: BMJ 2011;342:c7415

EARLY RETIREMENT

Retirement and socioeconomic inequalities

Burdorf’s editorial is highly relevant because many governments in Europe are raising the retirement age to balance the ratio of employed people to dependent ones as life expectancy increases steadily. In Belgium, the official retirement age is 65, but some people retire earlier. Politicians who want to increase the effective retirement age are primarily trying to eliminate these early retirements. Opposition comes mainly from trade unions, and one of their concerns is the effect on health.

Studies on inequalities in healthy life expectancy show that this concern might be justified. In 2004, one study found that most people with low educational status will have serious health problems before they reach 65, whereas more highly educated people can enjoy their retirement in good health for at least a couple of years.

We set up an observational study in 11 primary healthcare centres to assess the health status and employability of people aged 55-65. We found high rates of chronic diseases, especially in women and people doing physically demanding work, and this was associated with a high proportion of disability in these groups.

These data suggest that early retirement can be an important opportunity for many workers below 65 to leave employment when their physical or mental ability to work is impaired. Eliminating this possibility of early retirement will probably have major social and medical implications for a large proportion of our workforce.

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Cite this as: BMJ 2011;342:c7400

INCOME TO SURVIVE

How much do BMA and RSM pay their lowest paid workers?

The introduction of the minimum wage was followed by recognition of the need for a living wage—the subject of the Joseph Rowntree Foundation’s recent report. The association between poverty and health has been accepted since the middle of the 19th century. It would therefore be interesting to know what two medical organisations—the BMA and the Royal Society of Medicine (RSM)—pay their lowest paid staff: cleaners, restaurant and cafe workers, porters, and similar workers.

Such organisations should be leading by example. Could they tell us their hourly rates of pay for such employees?

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Competing interests: None declared.

1 Dowler E. Income needed to achieve a minimum standard of living. BMJ 2010;341:c4070. (17 August.)
2 Stephen WJ. How much do the BMA and the RSM pay their lowest paid workers? BMJ 2010;341:c7304.

Cite this as: BMJ 2010;341:c7386

BMA pays well over minimum wage

The BMA recognises the valuable contribution of its staff and this is reflected in its pay rates. The lowest paid members of staff receive salaries greatly in excess of the minimum wage. These salaries are also all above the level of the London Living Wage, as set by the Greater London Authority, although we do not formally recognise the scheme or operate it for our staff.

A small number of people working within the BMA, such as catering staff, are employed and paid by external contractors. As such, we do not know their individual rates of pay.

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Competing interests: None declared.

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Cite this as: BMJ 2010;341:c7305

Editor’s note: We approached the RSM for its response, but its chief executive declined.

MEDICAL REPORTS AND PRISONERS

Publish Lockerbie bomber’s medical report

Sixteen months ago, Abdelbaset Al-Megrahi, the Lockerbie bomber, was released from jail on compassionate grounds, so now might be a good time to publish the medical report to the Scottish parliament suggesting that he had three months to live. We could then see how convincing were the medical grounds for the early release of a convicted criminal from jail.

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Competing interests: None declared.

1 Swire J. Lockerbie: why we should be proud of Al-Megrahi’s doctors. BMJ 2010;340:c1725. (30 March.)

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