Reviewer's report

Title: Audit of head injury management in Accident and Emergency at two hospitals: Implications for Nice CT guidelines.

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Reviewer: Ian Swann

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General
Audit Of Head Injury Management In Accident & Emergency At Two Hospitals: Implications For The Implementation Of The Nice Ct Guidelines.

Reviewed by Mr. I J Swann.

The question posed:
The three objectives of the audit are clearly stated in the methodology section. These relate to: the pathways of care; the way the information is collected; and the implication of CT guidelines of both information collection and referral to radiography.

In the abstract objectives are stated in a single sentence but failed to mention head injury. The abstract should also mention that this is a retrospective audit. The abstract conclusions, that the incidence of presentation at a hospital with head injury is high cannot have been drawn from this study. The incidence is actually low, compared with other studies (about 4 to 5% of new attenders compared to 7 to 11% in other studies). MAJ
Where the NICE guidelines for “CT scans” are mentioned – it would better to say “CT brain scans”. DISCRET

Introduction -
The first paragraph states that the skull x-ray is 38% sensitive and 95% specific. This should be clarified - presumably this means sensitivity for a skull fracture rather than for an intracranial haematoma? DISCRET

Figure 1 box B should be clarified as being the Canadian rules rather than the NICE guidelines. The final published clinical guideline for NICE 2003 has modifications. The last 3 indicators for CT scan (Age >65, coagulopathy and dangerous mechanism) have the additional proviso of “providing some loss of consciousness or amnesia has been experienced”. MAJ

At the bottom of page 3 there is a mention that the guidelines of 1984 have since been modified - here reference could be made to either the SIGN guidelines (August 2000) or recommendations of the Royal College of Surgeons of England. DISCRET

Methodology – the second sentence should read “a joint annual Accident & Emergency new attendance rate of 112,000”. MAJ

Results –
a total of 419 patients probably represents about 4-5% of the total patient attendances at the 2 A & E departments in the month of April 2003. If the exact percentage is known it should be mentioned.DISCRET
Page 6 Of particular interest are the 4 patients who were not admitted and yet had a GCS of less than 15. It would be particularly worrying if the GCS was less than 15 at the time of discharge. MAJ Some of the text simply repeats the data from the figure 2 and may be trimmed.DISCRET

At the top of page 7 - it would be expected that patients being admitted to a ward would have their GCS recorded more often than those who are discharged from A&E simply because they are more severely injured and greater priority for observation but also stay longer in the hospital (and A&E department). This is simply following long accepted guidelines and may be mentioned at this point or in the discussion.DISCRET

There are two types of amnesia, post traumatic amnesia and retrograde amnesia. Was any attempt made to distinguish between the two? If the quality of recording was poor the NICE guidelines require this distinction to be made.DISCRET

I am interested in the comments at the bottom of page 7 that 85% of patients GP’s were contacted with specific details of a head injury and that others received a routine notification of attendance. Presumably these are different types of discharge letters which reflect policies in the two different hospitals. Maybe this could be clarified.DISCRET

In the section, Guidelines for indications for CT scan of the head page 8, this states that 39 scans were the minimum required. As already mentioned, the NICE guidelines do not require all patients over the age of 65 to be scanned unless they have amnesia, loss of consciousness or other risk factors. The distinction between the Canadian guidelines and the final version of the NICE guidelines needs to be clarified. MAJ

Discussion

As already mentioned, at the bottom of page 8, the incidence of head injury presenting to the A & E department in this audit is not high compared to other A & E departments. Perhaps what is meant is that head injury is a common condition presenting to A & E departments. MAJ

Page 9 line 4 there is a typo error “incidence is known”.

In the last sentence of that paragraph I would challenge the assumption that there is now a greater emphasis on sending people home with information cards. Evidence for this statement would need to be presented. However, one influence which may reduce admission rates is closure of A&E short stay beds which has occurred in the past decade hospitals in the UK e.g. Glasgow and Belfast.DISCRET

In the next paragraph it would be worth mentioning the increased availability of 24 hour CT scanning in the UK as being the major influence in allowing the development of the new guidelines.DISCRET

At the bottom of page 9 – a protocol is mentioned. This needs to be defined early on in the paper perhaps under methodology. MAJ

At the bottom of page 10 – were the consultants in charge of the 2 A & E departments surprised at the result of the audit? It would be interesting to clarify this point.DISCRET
On page 11 it is not clear whether the 2 A & E departments were working to the NICE guidelines at the time of this study or were working to another protocol or another guideline. Was the information recorded adequate to satisfy the implementation of that protocol or guideline? I suspect not.

Page 12 – a typo error (prospect instead of prospective) audit

Summary

I think this paper requires considerable modification before it should be considered for publication. Some changes are major compulsory ones (MAJ) in particular the distinction between the Canadian rules and the NICE guidelines.

I would be happy to review the amended version when required.

Yours sincerely,

Ian Swann

Discretionary Revisions (which the author can choose to ignore)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct) - explained

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached) MAJ

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

None