TITLE: Managing Vasospasm in Patients with Acute Head Injury: Guidelines

DATE: 29 October 2009

RESEARCH QUESTION:

What are the guidelines for the management of vasospasm in adult patients with acute head injury?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 3, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 1999 and October 2009. Filters were applied to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed evidence-based guidelines.

One systematic review and one evidence-based guideline were identified pertaining to the management of vasospasm in adult patients with acute head injury. Additional information that may be of interest had been included in the appendix.
OVERALL SUMMARY OF FINDINGS:

The included systematic review examined the use of calcium channel blockers to prevent cerebral vasospasm after acute traumatic brain injury.\(^1\) While authors concluded that the effect of calcium channel blockers are uncertain, it was found that in a subgroup of brain injury patients with subarachnoid haemorrhage, nimodipine showed a beneficial effect, though adverse reactions were more common in patients treated with the drug.\(^1\)

The American College of Radiology’s (ACR) Appropriateness Criteria\(^\circledR\) head trauma guideline suggests using transcranial Doppler sonography to monitor cerebral blood flow velocity, as changes in blood flow velocity may indicate vasospasm.\(^2\)

Overall, there is limited information available pertaining to guidelines for the management of vasospasm in adult patients with acute head injury. Evidence that is available suggests that calcium channel blockers are unlikely to be effective,\(^1\) nimodipine has beneficial effects on patients with subarachnoid haemorrhage but has also been shown to have a higher rate of adverse reactions,\(^1\) and that monitoring with transcranial Doppler sonography is suggested.\(^2\)
REFERENCES SUMMARIZED:

Health technology assessments
No literature identified.

Systematic reviews and meta-analyses


Guidelines and recommendations


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APPENDIX – FURTHER INFORMATION:

Systematic reviews and meta-analyses


Observational studies


Review articles


