



**Title** Mild Head injury – Observation or CT Scanning?

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**Reference** SBU Report 153, 2000. ISBN 91-87890-69-0.  
Available in Swedish and English at <http://www.sbu.se>

## Aim

This report reviews the scientific literature on two strategies for the acute management of mild head injury (MHI), mainly regarding patient benefits and risks, but also regarding the costs to health care and society.

## Results and Conclusions

- In Sweden, 17 000 patients per year (191/100 000) are hospitalized for MHI. All hospitals report using observation as a care strategy for MHI. Computed tomography (CT) is used in approximately 20% of the cases.
- An estimated 9% of all MHI patients who are received at a hospital have abnormal findings on CT scanning. On average, 1% of the patients need neurosurgery or other interventions. Mortality is low, 0.1%.
- No studies directly compare hospital observation to CT scanning and discharge. Based on large series of patients, the differences between the results of these strategies can be neither proved nor disproved.
- It is not known how many patients need to be admitted for ethical, social, and medical reasons although CT findings may be normal.
- The direct costs of acute care hospitalization for patients with MHI in Sweden are estimated at 100 million SEK per year. The indirect costs to society for production lost due to absenteeism, etc, cannot be estimated with reasonable accuracy.
- The cost of the CT scanning strategy is estimated to be substantially lower than the cost of hospital observation.

## Methods

A literature search was conducted in databases from 1966 to 2000. The keywords included combinations of various terms for brain concussion and minor head injury. Current clinical practice was surveyed, and national data on in-hospital care and costs were also analyzed.

## Further research required

Regardless of the treatment strategy, the risks for patients with MHI appear to be low, but potentially serious. No comparative studies on the two strategies are available. Using a study size of 2000 to 3000 patients, the hypothesis can be tested that the CT method does not give inferior long-term results as compared to hospital admittance. At the same time, it is possible to assess practical implementability and economics. Such a study is essential.