

Information for patients from JNNP

Long term impact of head injuries

Introduction

Head injuries can have a devastating effect on a person's life and the long-term outlook is often bleak. However, researchers have found that feeling in control of your own life may improve the condition, even years after the injury.

What do we know already?

Doctors know that head injuries can lead to disability, but not much is known about the long-term impact of head injury. Do people tend to get worse? Do they get better, and if so, to what extent?

Previous research on head injury tended to look at narrow groups of people, such as only those with severe head injury. Others took a snapshot at a point in time – say, 30 years after injury – but ignored all that had gone on in the intervening years. Few studies have looked at the mental or emotional effect of head injury.

This study followed a group of 219 people who were admitted to hospitals in Glasgow with head injuries ranging from mild to severe. The ages of the people in the study spanned 14 to 81 years (the average age was 39). The group had previously been followed up at one year and five to seven years after injury. The researchers in this study assessed the group 12 to 14 years after their injury occurred.

The researchers gauged the subjects' level of disability using the extended Glasgow Outcome Scale (GOSE). GOSE rates disability into eight categories, ranging from 'death' to 'upper good recovery'. The researchers also looked at the psychological wellbeing of the subjects, including perceived level of stress, self-esteem, and alcohol and drug dependence.

What does the new study say?

The researchers confirmed that the outlook after a head injury is often bleak. About 16 in 100 people had died by the 12- to 14-year follow-up period. At the one-year and five- to seven-year follow-up periods, just over half (53 in 100) of the head injury victims were disabled. The situation remained almost unchanged at the 12- to 14-year follow-up point (51 in 100 were disabled). A recovery shortly after injury proved to be a poor indicator of later outcomes. Of the people who made a good recovery one year after the injury, 20 in 100 died and 22 in 100 were disabled at 12 to 14 years.

However, the level of disability did improve for one-third of head injury victims between the one-year follow-up and the 12- to 14-year follow-up. The researchers also found late recovery in nearly one-quarter of the subjects. Between the five- to seven-year follow-up and the 12- to 14-year follow-up, the level of disability – as rated on the GOSE scale – improved for 23 in every 100 people.

One of the interesting findings from this study is that people whose disability deteriorated between the five- to seven-year period and the 12- to 14-year period, perceived that their lives were significantly controlled by others. This led the researchers to conclude that it might be important to change patients' perception of the control they have over their own lives because it might impact their recovery, even years after an injury.

How reliable are the findings?

This is one of only a very few studies that followed up a fairly large group of head-injury patients over a long period and assessed their disability as well as their mental health. However, as with many studies that follow people up over long periods of time (longitudinal studies), researchers end up with fewer patients at the end of the study than they started with. In this case, the researchers started with 219 subjects and ended up with 121. It is impossible to draw firm conclusions about, say, the relationship between level of disability and feelings of control over one's environment with such a small group. However, it does suggest interesting areas for future research, such as the potential benefit of psychological therapy for head injury patients.

What does this mean for me?

This study shows that improvements in disability resulting from a head injury are possible, even years after the injury occurred. It is also possible – but unproven – that interventions to improve the patient's perception of control over his/her life, may lessen their level disability.

From: McMillan TM, Teasdale GM, Stewart E. Disability in young people and adults after head injury: 12–14 year follow-up of a prospective cohort. *J Neurol Neurosurg Psychiatry* 2012;**83**:1086–91. <http://jnnp.bmj.com/content/83/11/1086.full>

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