

A-Z of Brain Disorders

Spatial Neglect

Description:

Spatial neglect, also called hemispacial neglect, unilateral neglect, or hemi-inattention is a serious and disabling consequence of stroke. It can be defined as a defective ability to explore or attend to stimuli presented on the side contralateral to the brain lesion. This inattention towards one side of space is, by definition, not caused by visual impairments (visual field defects). Typically, there is no sharp border between neglected and non-neglected space; the blurred demarcation line rather changes along a continuum, which may vary depending on the context.

Neglect is predominantly associated with lesions to the right side of the brain and causes the neglect of the left side of space. Neglect can result in numerous bizarre and debilitating behaviours: Patients with right brain damage may collide with obstacles on their left, eat food only from the right side of their plate, ignore people situated on their left, or fail to dress or shave their left side. In some cases patients may behave as if the left half of their world had ceased to exist and in many cases they do not even realize that something is wrong.

Numerous subtypes and forms of spatial neglect have been observed. Some patients with right brain damage, for example, may primarily neglect the left side of their body (personal neglect), whereas other patients neglect the left in reaching (near) space, and still others only neglect the left side of space beyond their reach (far space). Furthermore, some patients may be particularly affected in detecting left-sided stimuli, while others are impaired in the execution of motor movements towards those stimuli. Many more subtypes of neglect have been described in the literature. It is generally thought that differences in the location and extent of the brain damage across patients underlie the numerous neglect subtypes.

Neglect is hardly ever an isolated syndrome, often it is associated with visual field deficits, hemiparesis, lack of awareness for the existing problems (anosognosia), impaired spatial working memory and reduced attentional capacities. Depending on the lesion location and lesion size still other cognitive functions may be affected.

Treatment

There is yet no treatment known that has proved its effectiveness in neglect therapy to a satisfactory degree. Most studies reporting therapeutic success have been single cases rather than randomized controlled trials. At least eighteen different types of therapy have been attempted to ameliorate neglect. The lack of evidence for therapeutic success in group studies may be that specific treatments are effective for some forms of neglect but not others, and thus obvious shortcomings of treatment procedures are in fact due to the heterogeneity of patient samples.

Prognosis

As a rule of thumb one can say that neglect recovers most quickly over the first 10 days after the stroke and reaches a plateau at three months. After six months roughly 70% of patients after right brain damage and nearly all patients after left brain damage have recovered from neglect. The remaining may exhibit residual neglect symptoms for up to several years.

The initial presence of neglect is associated with increased length of hospital stay, and reduced participation in activities of daily living after discharge to home. Neglect has been shown to be one of the most important determinants of the level of independence after discharge.

Support Services

- List of State Stroke Associations: <http://strokefoundation.com.au/afterstroke/state-associations/>
- List of Stroke Support Groups: <http://strokefoundation.com.au/afterstroke/stroke-support-groups/>

Links to other websites for further information

- http://en.wikipedia.org/wiki/Hemispatial_neglect
- <http://www.scholarpedia.org/article/Hemineglect>