Long-term neuroendocrine dysfunction following traumatic brain injury: an overview

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Another clinical research study, undertaken in 2005 by Amaar Agha et al at the Beaumont Hospital in Dublin, investigated hypothalypism in TBI patients during the acute phase of recovery and at 6 and 12 months after injury They found that, at 12 months post-TBI, 10% of the patients had GHD; 18% had ACHT deficiency including one de novo case; 12.5% were gonadotrophic deficient in TSH; 12.5% of the patients also exhibited hyperprolactinaemia at 12 months post-TBI (Agha, et al, 2005).

Conclusion: screening, therapy and rehabilitation

It is clear from the evidence that long-term neuroendocrine dysfunction is not uncommon and may be underdiagnosed in survivors of TBI. Despite the wealth of clinical studies and case reports, the authors are not aware of any establishment in the UK that routinely performs endocrine function tests in survivors of traumatic brain injury.

A consensus statement on screening for neuroendocrine dysfunction following TBI was published by Ghigo et al in 2005, and numerous calls for greater screening have been made in literature targeted at brain injury specialists and clinical endocrinologists. Yet, outside of the clinical studies and case reports, little is done to identify and treat those TBI survivors at risk or suffering from long-term neuroendocrine dysfunction. Few clinicians are aware of the potential long-term neuroendocrine sequelae to TBI, and few rehabilitation units employ the skills of clinical endocrinologists.

Any number of proposals for neuroendocrine screening (e.g. Gho, et al, 2005; and Agha, et al. 2005) will not help sufferers of long-term TBI-induced neuroendocrine dysfunction unless they are agreed upon and implemented. Unfortunately, financial limitations and cost effectiveness mean that screening should be targeted at the most ‘at-risk’ population, but this population is difficult to identify as severity of TBI does not indicate the potential for neuroendocrinopathy (Shin, et al, 2001). Screening for neuroendocrine dysfunction must be applied more widely to mild, moderate and severe TBI survivors bearing in mind that some neuroendocrinopathies can occur 10-20 years post TBI (Lea-Carr et al, 2005). Rehabilitation after TBI can be a very difficult time for both patient and caregiver. It is crucial for the physical and psychological well-being of the patient to ensure recovery and rehabilitation can occur in the optimal endocrine setting. A previously unidentified patient may benefit from the correct hormone replacement therapies.

References


