Idioapthic Intracranial Hypertension (IIH) and cognitive changes – new reseach summary for IIHUK website

This summary is to explain new research in IIH. This research focus is on cognition which is the ability to perceive and react, process and understand, store and retrieve information, make decisions and produce appropriate responses. This research article can be downloaded for free at:
https://academic.oup.com/braincomms/article/3/3/fcab202/6362870?login=true

From as early as 1986, cognition issues have been noted in Idiopathic Intracranial Hypertension (IIH), and people with IIH have commonly reporting symptoms such as; brain fog and issues with slowness of thinking or problems with their memory. However, cognitive function is not widely recognised or addressed in IIH. Clinical screening tools used for other conditons are not sensitive enough to pick up these signs in the IIH patient population. Although there are a few previous studies that have investigated issues associated with cognition, these have been small and they did not look at the underlying causes.

Grech et al, performed cognitive tests in a study of 66 IIH participants and compared their results to 25 body mass index-matched control participants to identify impairments in attention, memory and executive function. They compared cognitive performance between participants at baseline, after a lumbar puncture (in which brain pressure is reduced) and following 12-months of a weight loss intervention (either surgery or a community weight loss plan). The study also investigated the link between clinical measurements (such as vision, visual function and headaches) and cognitive performance.

Grech et al demonstrated that executive function and attention is impaired in IIH participants compared to controls at baseline (start of the study with active disease). However, after a lumbar puncture (which temporarily reduced the brain pressure) the measure of attention improved in IIH participants.

The cognitive issues identified proved reversible, as participants improved in their measures of executive function, sustained attention and memory over 12-months. These improvements were also linked to a reduction in brain pressure. Headache severity, obstructive sleep apnoea (a sleep related breathing disorder commonly seen in IIH), depression and serum cortisol (a stress hormone) were all linked with cognitive performance in IIH.

One important finding was that the ability to perform visual field tests reliably was linked to poor attention in participants, which is a significant finding since visual field testing is routinely done to monitor the disease.

Grech et al, propose that cognitive impairment should be accepted as a clinical feature of IIH and that cognitive deficits can improve over time and with reduction of intracranial pressure. Treating depression, obstructive sleep apnoea and headache could improve cognitive performance.