CereScan®

THE MOST PRECISE IN THE ASSISTANCE OF BRAIN DIAGNOSTICS

TRAUMATIC BRAIN INJURY CASE STUDY

Clinical History

A 46-year-old male with a history of multiple head injuries that was referred for brain qSPECT evaluation. Patient was experiencing a variety of progressive emotional, behavioral and cognitive symptoms since his second brain injury in the fall of 2012.

Chief Complaints

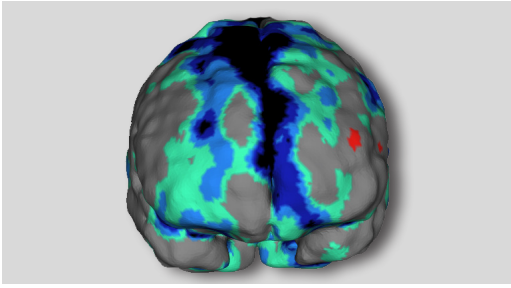
- Confusion
- Short-term memory problems
- Decreased judgment
- Personality changes
- Impulse control problems
- Difficulty with concentration
- Difficulty following instructions
- Making careless mistakes
- Distractibility
- Risky behavior
- Compulsive behavior
- Frequent dizziness
- Balance problems
- Blurred/double vision

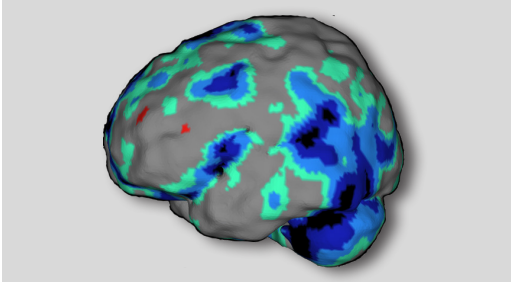
Brain qSPECT® Radiologic Impressions

Focal areas of abnormal cortical hypoperfusion in the frontal, temporal, occipital and cerebellar areas (signature pattern for traumatic brain injury). In addition, focal areas of abnormal subcortical hypoperfusion were noted in the basal ganglia and thalamic nuclei.

The frontal/occipital findings are suggestive of a coup/countercoup mechanism of injury frequently seen in trauma. The apparent functional widening of the anterior interhemispheric fissure is suggestive of underlying functional atrophy of the frontal lobes.

The pattern of these abnormalities is most consistent with the scientific literature pertaining to traumatic brain injury and the patient's clinical history. Imaging findings must always be correlated clinically.





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THE MOST PRECISE IN THE ASSISTANCE OF BRAIN DIAGNOSTICS

ALZHEIMER'S DISEASE CASE STUDY

Clinical History

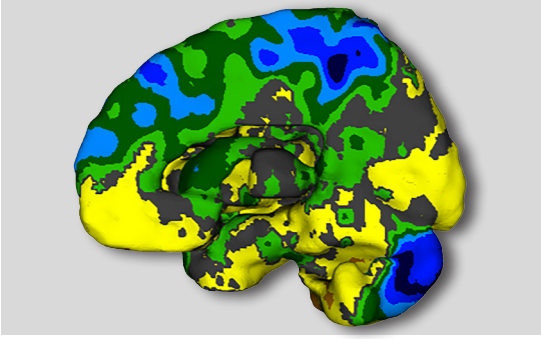
A 63-year-old male was referred for a brain qSPECT evaluation by his neurologist for confirmation of a closed head injury. The patient has a history of multiple head injuries and illicit substance use and was experiencing a variety of progressive emotional, behavioral and cognitive symptoms.

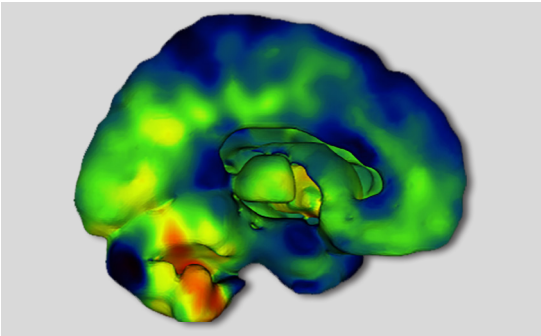
Chief Complaints

- Confusion
- Cognitive function problems
- Disorganization
- Problems with word finding
- Low frustration tolerance
- Moodiness
- Frequent headaches
- Physical fatigue

Brain qSPECT® Radiologic Impressions

Focal areas of abnormal temporal and parietal (to include precuneus and posterior cingulate gyrus) hypoperfusion (signature pattern for Alzheimer's-like process). In addition, the finding of decreased globus pallidus perfusion is almost pathognomonic of possible past carbon monoxide exposure and should also be considered in the differential diagnosis. The patient also demonstrates a pattern of abnormal cortical perfusion in the frontal, parietal, temporal and cerebellar lobes as well as subcortically in the basal ganglia.





The nature, location and pattern of these abnormalities is most consistent with the scientific literature pertaining to Alzheimer's disease, Traumatic Brain Injury and the patient's clinical history, which was received after the blind review. Imaging findings must always be correlated clinically. Neurological workup recommended to further clarify.

Alzheimer's References: CereMetrix.io/AlzReferences