INTRATHECAL BACLOFEN AS A PHARMACOLOGIC TREATMENT FOR TACTILE DEFENSIVENESS AND SYMPTOMS OF AUTISM SPECTRUM DISORDER

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Patient: An 18-year-old male with Autism Spectrum Disorder (ASD) and Tactile Defensiveness suffered a traumatic brain injury (TBI).

Case Description: Pre-TBI, the patient exhibited mild tactile defensiveness but was independent in self-care. Two years post-TBI, he was severely spastic and completely dependent on others for care. His tactile defensiveness was exacerbated and his social and language skills were markedly diminished. He underwent a trial of intrathecal baclofen, followed by treatment for his spasticity with a surgical implantation of an intrathecal pump for continuous infusion of baclofen.

Assessment/Results: Subsequent to intrathecal baclofen treatment, the patient showed significant reduction in his spasticity, with increased mobility and self-care. Unexpectedly, he demonstrated marked improvements in his tactile defensiveness and ASD, including social interaction skills and language ability.

Discussion: Baclofen is an anti-spastic agent which is an analogue of the neurotransmitter gamma-amino butyric acid (GABA). Current literature describes a decrease in the number of GABAergic Purkinje cells, reduced levels of GABA receptors, and decreased GABA synthesizing enzymes in brains of patients with ASD. Disruption of the GABAergic system might potentially provide a mechanism of action by which intrathecal baclofen (a GABA analogue) could improve symptoms of ASD. Further, the anti-nociceptive effect of baclofen may be the mechanism by which baclofen could improve symptoms of tactile defensiveness.

Conclusion: This is the first reported case, to our knowledge, of treatment for tactile defensiveness or ASD symptoms with intrathecal baclofen. Due to the improvements in this patient's tactile defensiveness, social interaction, and language ability, further studies are recommended.