E-Poster

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Cannabinoids as Treatment for Spasticity in Spinal Cord Injury- Case Report

Topic: Pharmacological Agents

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BACKGROUND

Spasticity is a common symptom in patients with Spinal Cord Injury (SCI). Approximately 30% of the patients will need treatment, due to negative impact on the functional status. Unsuccessful treatment can enlarge the functional disability, lead to severe pain, psychological burden and further complications. Many beneficial treatment approaches have been used (oral medication, baclofen pumps, botulinum toxin A injections, neuromodulation, e.t.c.) and treatment choices keep increasing. The last decades, more evidence support the use of cannabinoids for the management of spasticity. Most research refers to patients with Multiple Sclerosis (MS) but encouraging results appear also for other neurological disorders. The main cannabinoids used for medical treatment are Tetrahydrocannabinol (THC) and Cannabidiol (CBD). In spasticity, loss of the GABAergic inhibitory interneuron's activation causes increased glutamate release on the synaptic cleft. Delta-9-THC activates presynaptic cannabinoid type 1 (CB1) receptors to inhibit glutamate release, leading to reduction in spasticity. The main concern for the use of cannabinoids (basically THC) is their psychotropic action. The evidence that CBD reduces the psychotropic action of THC has created new opportunities for treatment with the combination of these two substances.

CASE DESCRIPTION

This case refers to a male, 56 years old with tetraplegia, AIS-A, sensory C5-motor C6 level, due to traumatic SCI before 40 years. He presented significant spasticity, mAshworth 2-3 in most lower limbs (LL) muscles, interfering with activities of daily living, quality of sleep and health-related quality of life. He also complained for episodes of neuropathic pain. Through the years, intramuscular botulinum toxin A injections and oral medication were the treatment options. The patient was not satisfied of the management and refused the baclofen pump treatment. Six months ago, was decided to start treatment with medical cannabinoids (combination of THC: 9% and CBD: 13%), per inhaler device. He is still in low doses (cannabis 150 mg: 0.05 grX 1-2/day), presenting significant decrease of LL spasticity, relief of neuropathic pain episodes and improvement on sleep quality (he decreased sleeping medication). Patient satisfaction score at 1 and 6 months of the treatment, assessed with The Short Assessment of Patient Satisfaction (SAPS), remains high.

CONCLUSION

Cannabinoids seem to be an effective treatment for spasticity in SCI, but further research is needed. Current data support that the appropriate ratio of THC: CBD of medical cannabis leads to the most effective results with the less side effects. The results of long-term use meant to be recorded.

Statement of Disclosures

None

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