NABILONE AND THC/CBD FOR THE TREATMENT OF FAILED BACK SURGERY SYNDROME (FBSS) REFRACTORY PAIN

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Failed Back Surgery Syndrome (FBSS) is defined as "spinal pain of unknown origin either persisting despite surgical intervention or appearing after surgical intervention for spinal pain originally in the same topographical location".

Several conditions have been identified as causes of FBSS: epidural fibrosis, canal stenosis (global or lateral), foraminal stenosis, retained disc fragment, recurrent disc herniation or degeneration, spinal instability, facet joint pain, sacroiliac joint pain, discitis, adhesive arachnoiditis and others.

This condition affects 20% to 40% of patients who have undergone lumbar spine surgery and 0.02% to 2% of the general population is suffering for this syndrome.

Symptoms of FBSS are: persistence of low back pain, deterioration or recurrence of radiculopathy, sensory and/or motor deficit, sphincter dysfunction.

Chronic opioid therapy does not improve long-term pain management. A similar condition can occur with conservative measures like peridural steroids injections, intrathecal analgesics infusion and local anesthetics injections. Despite a large part of FBSS patients benefits of radio-frequency treatment and/or spinal cord stimulation (SCS), this is not true for a small percentage of them. Pain could be treated by drugs modulating endocannabinoid system and it could represent a pharmacological option in a multimodal treatment approach for neuropathic pain. Authors present a retrospective case series documenting the efficacy and safety of oral administration of cannabinoids agonists (THC/CBD and nabilone) in 20 FBSS patients, presenting moderate to severe chronic pain that does not response to other treatment regimens. Cannabinoids agonists were administered in association with the practice of spinal cord stimulation (SCS). Other analgesic therapies were discontinued before the beginning of the treatment. The study was performed during the period between September 2014 and January 2016 and the duration was up to 12 months.

Characteristics and severity of neuropathic pain was measured using the Douleur Neuropathique 4 questionnaire. The Brief Pain Inventory allows patients to rate the severity of their pain and the degree to which pain interferes with common dimensions of feeling and function. Patients aged between 45 and 69.

All patients received a fixed dose of cannabinoid agonists: treatment was initiated with nabilone 1mg/day or an oleic suspension for oral administration of THC/CBD 25mg/day.

Basal dose was increased depending on effects on pain control.

Adverse reactions were treated by decreasing the subscripted dose. If adverse events required the suspension of the administration of the initially prescribed drug, the same was switched with the other available in the study. An immediate analgesic effect, within the first week, was achieved in the 70% of patients. Reported pain mean values (NRS) decreased from 8.15 to 4.9 at the end of the observational time, indicating an improvement in analgesia. A considerable number patients (80%) reported improvement in quality of sleep, especially with the THC/CBD combination ($p<0.01$). Two patients treated with Nabilone and one patient treated with THC/CBD needed a drug switching because of excessive drowsiness and confusion. Other side effects reported were headaches, nausea and vomiting, apathy, puffy lips, red cheeks, fatigue, palpitations, decreased clarity, decreased concentration, decreased focus, dizziness, drowsiness, transient deformity of left side of face, depression, forgetfulness and increased urinary retention. One patient reported increased pain when discontinue nabilone.

The maximum reached dose of nabilone was 4 mg per day, the minimum was 1 mg/day with the mean final dose being 2.9 mg/day. The maximum final dose of THC/CBD was 100 mg/day, the minimum was 50 mg/day with the mean final dose of 68.5 mg/day.

Analysis of results confirm the effectiveness of nabilone and THC/CBD for the treatment of FBSS refractory pain. BPI examination showed an improvement of mood and in general activities as well ($p<0.001$). Overall, nabilone and THC/CBD, were well tolerated and were not associated with any severe side effect. The current case series suggests that both oral THC/CBD or Nabilone, may represent an alternative treatment strategy in FBSS patients with chronic, severe refractory pain. Furthermore, cannabinoid agonists could be considered a safe and efficacy line of therapy to improve effect of SCS and to alleviate part of the complex pattern of symptoms in this category of patients.