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Case Report

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The SONG laser protocol and multiple system atrophy-parkinsonian (MSA-P)

Abstract

Background: This case study describes the benefits seen in a patient suffering from Multiple System Atrophy Parkinsonian (MSA-P). Our hypothesis is that the SONG Laser Protocol (possibly by neuronal cell stabilisation and repair following 3 treatments with 1 month intervals) may have both neurological and physical benefits in a patient suffering from MSA-P.

Methods: This was a case study focusing on a single patient suffering from MSA-P. The SONG Laser Protocol was delivered in a clinic setting and the primary outcome measures were the neurological benefits and wound healing benefits.

Results: The patient showed marked neurological improvement following the SONG Laser Protocol. In addition, the patient benefitted from the healing of a large sacral ulcer following the SONG Laser Protocol.

Conclusion: The SONG Laser Protocol may have a beneficial effect on MSA-P. A clinical trial is needed to confirm safety and efficacy.

Keywords: multiple system atrophy, parkinsonian, SONG laser activation, human very small embryonic like (hVSEL) stem cells

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Introduction

Multiple System Atrophy (MSA) is a global cause of morbidity and mortality, and it presents with a combination of either Parkinsonian, autonomic or cerebellar dysfunction.[1] The current treatment of MSA-P includes L-Dopa and midodrine in addition to physiotherapy and occupational therapy to support and manage wide ranging symptoms.[2]

The SONG Laser Protocol (formerly known as the QiGen Protocol) involves the activation of autologous human Very Small Embryonic Like (hVSEL) stem cells[3] in Platelet Rich Plasma (PRP) by a modulated red laser known as the SONG Laser.[4] The mechanism of action of the SONG Laser is still the subject of ongoing research and a proposed mechanism based on quantum mechanics has been hypothesized.[5] The SONG Laser Protocol is also proposed to be beneficial as an anti-aging modality[6] and in the treatment of dementi.[6,7]

Methods

This was collaborative work between Greenberg Regenerative Medicine, Bryn Mawr, Pennsylvania, USA and Qigenix, Carlsbad, California, USA. The patient provided informed consent prior to receiving the SONG Laser Protocol. The SONG Laser Protocol is a modified autologous Platelet Rich Plasma (PRP) procedure with minimal manipulation, and it is a closed procedure. As such it is a low-risk procedure and does not require Ethical Committee approval.

The patient in this case study was a male patient aged 66 who was first diagnosed with MSA-P 3 years previously. The patient had a sacral ulcer co-morbidity and was taking no other medication at the time of the SONG Laser Protocol. The patient was suffering from deteriorating neuronal health and also from a non-healing Stage 4 sacral decubitus ulcer. At the time of treatment, the patient was bed-bound. The patient received 2 different treatments to treat:

1. Deteriorating neuronal/brain function
2. The non-healing sacral ulcer

In terms of brain function the patient received three 80 mL intravenous infusions of SONG laser activated hVSEL stem cells in PRP at one-month intervals for 3 months. The SONG laser was applied to the brain at each treatment with emphasis on the basal ganglia area to enhance homing of the activated hVSEL stem cells. The treatments covered a total period of 3 months

In terms of sacral ulcer healing the patient received 3 treatments using standard non-lasered PRP which was treated with either calcium chloride or thrombin to form a clot. The clotted PRP was placed into the ulcer wound and this was repeated 3 times over a period of 3 months. Additional liquid PRP was provided to use on fresh dressings. In addition, 10 mL of SONG laser activated hVSEL stem cells in PRP was injected 3 times around the edge of the ulcer at the same time as the PRP clot treatment. Figure 1 shows the ulcer before treatment and Figure 2 shows the ulcer post-treatment.

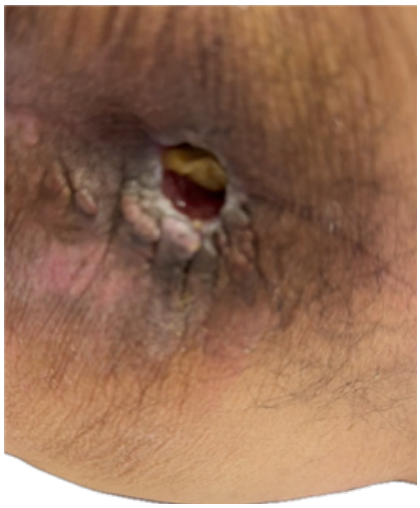

Figure 1 Pre-treatment sacral ulcer.

Outcome

The patient presented with a diagnosis of Multiple System Atrophy (MSA) Vs. Parkinson's Disease. Patient reports systemic decrease in strength, difficulty walking, bradykinesia, postural changes including cervical dystonia (Anterocollis), decreased reaction time, difficulty speaking and requires assistance for all activities of daily living and instrumental activities of daily living.

January 2020: pre-treatment

Upper extremity strength

Shoulder flexion: R 3-/5, L 3-/5

Shoulder abduction: R 3-/5, L 3-/5

Elbow flexion: R 4-/5, L 4-/5

Elbow extension: R 4-/5, L 3+/5

Lower extremity strength

Hip flexion: R 3-/5, L 3/5

Knee flexion: R 3-/5, L 3-/5

Knee extension: R 3+/5, L 3-/5 (limited by spasticity - through available range)

Dorsi-Flexion: R 3-/5, L 3-/5

Plantar-Flexion: R 2+/5, L 2/5

Functional mobility

Gait: Requires moderate assistance for ambulation with or without RW, able to ambulate 120 feet with moderate assistance

Standing tolerance: Minimum assistance and Upper Extremity support 45+ minutes

Stairs: Requires moderate assistance X 2 for ascending/descending

Sit-stand: Minimum assistance with Upper Extremity support on arm of chair

June 2023: pre-treatment

Upper extremity strength

Shoulder flexion: R 2+/5, L 2/5

Shoulder abduction: R 2+/5, L 2/5

Elbow flexion: R 4-/5, L 3+/5

Elbow extension: R 3+/5, L 2+/5

Lower extremity strength

Hip flexion: R 2+/5, L 2/5

Knee flexion: B/L 3-/5

Knee extension: R 3+/5, L 3-/5 (limited by spasticity - through available range)

Dorsi-flexion: R 2+/5, L 2/5

Plantar-flexion: R 2/5, L 2/5

Functional mobility

Gait: Requires moderate to maximum assistance for ambulation with or without RW, able to ambulate 20 feet with moderate to maximum assistance

Standing tolerance: Moderate to maximum assistance and upper extremity support 15 minutes prior to requiring increased Assistance

Stairs: Requires moderate assistance X 2 for ascending/descending

Sit-stand: Moderate assistance with Upper Extremity support on arm of chair

Patient presented with overall decreased strength in upper extremity and lower extremity strength, requires increased assistance for transfers, activities of daily living and instrumental activities of daily living. New onset increased below knee flexion during standing resulting in decreased tolerance for assisted standing and walking. Marked increase in bradykinesia with increased difficulty using upper extremity to point to letters for communication.

March 2024: post-treatment

Upper extremity strength

Shoulder flexion: R 3-/5, L 2/5

Shoulder abduction: R 3-/5, L 2/5

Elbow flexion: R 4-/5, L 3+/5

Elbow extension: R 3+/5, L 2+/5

Lower extremity strength

Hip flexion: R 3-/5, L 2+/5

Knee flexion: B/L 3-/5

Knee extension: R 3+/5, L 3-/5 (limited by spasticity - through available range)

Dorsi-Flexion: R 3-/5, L 2/5

Plantar-Flexion: R 2/5, L 2/5

Functional mobility

Gait: Requires moderate assistance for ambulation with or without RW, able to ambulate 100 feet

Standing tolerance: Minimum assistance and Upper Extremity support 35+ minutes

Stairs: Requires moderate assistance X 2 for ascending/descending

Sit-stand: Minimum to moderate assistance with Upper Extremity support on arm of chair

Notable increase in Upper Extremity and Lower Extremity strength. Marked improvement in reaction time, decreased bradykinesia and decreased assistance for ambulation since June 2023. Patient presented with significant improved of right Upper Extremity control and speed of movement improving ability to communicate through pointing. Patient had decreased knee flexion in standing and is able to self-correct to create more knee extension. This has resulted in significantly increased time for standing and increased ambulation distance when compared to pre-treatment. Overall improvement in transfers including bed mobility, sit-stand and ambulation marked by decreased assistance.

At the time of receiving the SONG Laser Protocol, both intravenous and into the periphery of the ulcer, the patient was bed-ridden with declining neuronal function and an open sacral ulcer. Following SONG laser activated hVSEL stem cell treatment the patient was:

a) Able to stand for 35+ minutes

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b) Trying to vocalise

c) Attempting to pull-up with no assistance

d) Benefiting from reduced dysphagia

e) Able to ride a recumbent stationary bicycle

These neurological improvements have continued over a period of 3 months. At 10 weeks following the treatment of the sacral ulcer healed but still had granulation tissue around the periphery (Figure 2).

Figure 2 Post-treatment sacral ulcer.

These benefits arose in the days and weeks following the SONG Laser Protocol indicating possible cellular mechanisms of these long-term benefits. This use of the SONG Laser Protocol in MSA-P has potential in future therapeutics and is a safe and cost-effective procedure when compared to current standard treatments. The patient did not have any adverse events following the SONG Laser Protocol. Patients often report rapid benefits (within minutes) following the SONG Laser Protocol which are then often followed by slower and sustained benefits. We attribute the rapid benefits to the action of SONG Laser activated growth factors, cytokines and platelet secretory products in PRP in addition to the secretion of growth factors and cytokines from activated hVSEL stem cells. These are likely to be paracrine effects and to provide temporary benefits. Sustained benefits may be attributed to the homing and repopulation of the stem cell niche and stem cell pool by SONG Laser activated pluripotent hVSEL stem cells. Further basic research work is needed on the attribution of these actions and a double-blind placebo controlled clinical trial will be planned to confirm the preliminary data in this case study.

Acknowledgments

None.

Conflicts of interest

The authors declare that there are no conflicts of interest.

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