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Association of electro acupuncture and dental pulp stem cells from deciduous teeth on severe chronic spinal cord injury in dogs

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Studies have shown a possible synergism between electro acupuncture and stem cells grafts in the treatment of acute Spinal Cord Injury (SCI). This study aims to evaluate the association among those therapies in dogs with severe chronic SCI. 20 paraplegic dogs with thoracolumbar intervertebral disc disease were divided randomly into 4 groups: Stem Cells (ST), Electro Acupuncture (EA), Stem Cells+Electro Acupuncture (ST+EA) and Control group (C). 11 of 20 dogs have been treated already. Functional improvement was observed on Group ST (2 of 4 animals), Group EA (1 of 3 animals) and Group EA+ST (1 of 4 animals). Changes on neurological assessment were observed on: Group ST (2 points in 4 of 4 animals), Group EA (2 points in 2 animals and 1 point in 1 animal, of 3 animals) and Group ST+EA (6 points in 2 animals, 5 points in 1 animal and 1 point in 1 animal, of 4 animals). The 9 remaining animals will still be treated, including the animals from Control Group and more tests will still be analyzed (e.g., magnetic resonance images and neurotrophic factors levels on cerebrospinal fluid and blood serum). Although, the partial results showed that all animals had some kind of neurological improvement (including recovery of urinary control and voluntary tail movement), which is more evident on animals with hind limb medullar reflexes preserved prior to the study. Non statistical inference can be done for now until all animals are tested.

Biography

César Vinícius Gil Braz do Prado is a Certified Veterinary Acupuncturist. He has completed his Veterinary Graduation in 2010 and has specialized in Veterinary Acupuncture on 2012, working on Traditional Chinese Veterinary Medicine in small and wild animals since then. He is a Ph.D. student of University of São Paulo and his main research area is stem cells and acupuncture.

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