Utilizing Digital Therapeutics (JOGO) to treat Neuromuscular Dyssynergic Defecation

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Abstract

Digital therapeutics (DTx), also known as Software as a Medical Device (SaMD) is a newly defined term by the International Medical Device Regulators Forum (IMDRF) for software to be used as a treatment. JOGO is a DTx that is built based on the science of Electromyography Biofeedback (EMG BF) to facilitate neuromuscular retraining. Combining software and wearable EMG sensors with conventional therapy (CT), JOGO improved the quality of life for a 32 year old patient with slow transit, constipation with type 4 defecation dyssynergia. JOGO’s ease of use through features such as mobile gamification increases patient compliance relative to CT, augmenting clinical outcome. The patient received eight JOGO integrated therapy sessions over the course of three months. Protocol included relaxation exercises (mind and body, including yoga), a high fiber diet, and pelvic floor stretching/relaxation/bulge out exercises, external pelvic muscle stretching (gluteus maximus, hamstrings etc.) and biofeedback therapy. After the sessions, the patient was able to control bowel movements without straining. Initial muscle potential for relaxation was 19 mVs and for contraction was 67 mVs. Post therapy, the patient’s muscle potential for relaxation was 9 mVs and for contraction 70 mVs. JOGO integrated therapy helped acquire the goal of improving the patient’s incoordination of pelvic and abdominal muscles. Further studies are in the process to investigate improving this treatment.

Biography:

Uma Venkatesa is an American Board Certified Pelvic Floor Physiotherapist with over 30 years of experience in working closely with Uro-Gynaecologists, Obstetrics/Gynaecologists and Gastroenterologists in Pelvic Floor Physiotherapy Rehabilitation. Uma worked in Tampa, FL from 1992 to 2000 in several acute care and outpatient setup in several hospitals, ACLF, Women’s/ Pelvic Rehab Clinics treating patients with antenatal, post-natal, incontinence, aches and pain, breast cancer, stroke among female population. She also conducts workshops for training Physiotherapists on Pelvic Floor Dysfunctions, creating awareness about the Pelvic Floor Health among the school and college children, companies and women’s forums.

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