

5th International Conference on

PHYSIOTHERAPY

November 27-29, 2017 Dubai, UAE

Negative pulsed controlled pressure mechanotherapy in skin grafts: A case report

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Massage is a treatment approach in burnt skin grafts in order to avoid the collagen bundles, soften the tissue, prevent adhesions and desensitize the skin. Limitations are pain, discomfort, skin irritation, pressure and high frequency required. Negative pulsed controlled pressure mechanotherapy (NPCPM) could solve these. Physium System[®] is a medical device of NPCPM that mobilize tissues in different depths improving elasticity, edema reduction and desensitization of the grafted skin without pain. 16-year old woman with 2nd and 3rd degree burns on the back, gluteal area, left flank, thigh and leg, both mammary glands and heels, covering the 17% of the total body surface. Partial loss of the left auricular pavilion and deep temporal fascia. Homo skin grafts used to cover these areas with 45 days of hospitalization. At day 90, patient started NPCPM treatment. POSAS (The Patient and Observer Scar Assessment Scale) was assessed for measuring scar quality by the observer and patient: sum of 6 items from 1 to 10; VAS scale for pain. These were used in follow up at visit 1, 5 and 10 followed by registration of goniometry. At each follow up, treatment timing and pressure of NPCPM expressed in millibar (mbar) are stated. Results were in 10 NPCPM sessions. Visit 1 (26 min/50 mbar): VAS 7, POSAS Observer (POSAS_O): 50/60, POSAS Patient (POSAS_P): 59/60; hip internal rotation (IR) 10°/adduction 15°, spine flexion (SF) 15°. Visit 5 (43 min/70 mbar): VAS 5, POSAS_O:31/60, POSAS_P:45/60; hip IR 45°/adduction 40°, SF 38°. Visit 10 (60 min/ 90-100 mbar): VAS 3, POSAS_O: 26/60, POSAS_P: 31/60; hip and spine with normal range of motion (ROM). Thus, Physium System[®] is a safe medical device which can normalize the ROM, skin appearance and sense without pain in less treatment frequency. This could be a new treatment approach in skin grafted patients.

Biography

Manuel Garabal Miguel has completed his PhD from Alfonso X El Sabio University, UCM in Spain. Private Clinic Exercise, Ph. Professional cycling Teams and Official Ph. "Vuelta Ciclista a España" for 15 years, Official Ph. "Madrid en Danza 2015,2016,2017", Responsible-organizer of the Physiotherapy Area of the international sporting events of the Olympic candidacy of Madrid 2012 y 2016, introduces in Spain and Europe the technique of Kinesiotape in 1989, President of the Spanish Association of Shiatsu Specialists for 20 years, Shiatsu Teacher from 1987, ChD, In 1995 performs the foot and ankle rehabilitation protocols operated by minimal incision surgery for The Academy of Ambulatory Foot and Ankle surgery (USA). Biomechanics collaborator for Adidas Padel for your products, member of the Spanish Society of Ultrasound in Physiotherapy, member of the Physium System Scientific Committee, member of the Spanish Association of Physiotherapists and the Official College of Physiotherapists of Madrid

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