CO58-002-e

Treatment of lymphoedema: State of the art
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Keywords: Lymphoedema; Physical therapies; Treatment
Lymphoedema is an oedema caused by a reduced transport capacity of the lymphatic system, whether or not in combination with an increase in lymph load. Lymphoedema is divided into primary (or congenital) or secondary (or acquired) lymphoedema. Patients may develop swelling of the upper or lower extremities or at the midline. The ‘International Society of Lymphology’ states that the best treatment of pitting lymphoedema is Decongestive Lymphatic Therapy (DLT) [1]. This is a two-stage treatment programme. During the first or intensive phase, the lymphoedema has to be maximally reduced. This phase consists of skin care, manual lymphatic drainage, multi-layer bandaging and exercises. The second or maintenance phase aims to conserve and optimize the result obtained in the first phase. It consists of skin care, compression by a low-stretch elastic sleeve, exercises and manual lymphatic drainage when needed. Patients with non-pitting lymphoedema receive exactly the same treatment, in exception of applying a multi-layer bandage. This patient group may also receive a surgical treatment, such as liposuction, performing a lymphovenous anastomosis or a lymph node transplantation [2]. Additional to Decongestive Lymphatic Therapy, patients with lymphoedema may receive intermittent pneumatic compression therapy and lymph taping. During the presentation we will discuss the scientific evidence of the different modalities to treat lymphoedema and we will give an overview of the purpose and method of each modality.

References

CO58-003-e

Swallowing physiotherapy assessment as a predictor of unsuccessful extubation in relation to excess upper airway secretions?
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Keywords: Extubation failure; Physiotherapy; Swallowing disorders; Gag reflex
Background.– Extubation failure may result from various causes including swallowing dysfunction. Scarce studies have focused on swallowing evaluation to predict extubation failure. We hypothesized that bedside swallowing assessment before extubation is helpful to identify patients at risk of extubation failure.
Method.– Funded by tender APhP multicenter prospective observational study. All consecutive patients hospitalized in the medical and surgical intensive care units of four university hospitals, intubated and mechanically ventilated for ≥6 days were included. Before extubation, the global swallowing pattern (GSP) was evaluated by a physiotherapist including: (1) cervical, oral, labial, and lingual motricity; (2) gag reflexes; (3) swallowing reflexes; (4) volume of pharyngeal secretions. Extubation was decided by the attending physicians blinded to GSP assessment. We investigated predictors of reintubation within the first 72 hours after patient’s extubation in relation to aspiration or excess upper airway secretions.
Results.– One hundred and sixty patients (age: 61 [48–75] [median [25–75% interquartile]), M/F ratio: 1.5, SAPSII: 54 [42–66], duration of mechanical ventilation: 11 days [8–17]) were included. Six patients died. Non-invasive ventilation was used in 39 patients (25%) after extubation. Post-extubation pneumonia was assessed in 10 patients. Twenty-three patients (14.5%) required reintubation, 16 within the first 72 hours with seven (4.4%) in relation to aspiration or excess upper airway secretions. Using a multivariate analysis, normal GSP significantly predicted absence of reintubation within the first 72 hours following extubation in relation to aspiration or excess upper airway secretions (odds ratio 0.42, 95%–confidence interval [0.18; 0.99], p = 0.04). Presence of normal right (0.12, [0.03; 0.59]) or left gag reflexes (0.13, [0.03; 0.63]) was significantly associated to absence of reintubation, with a negative predictive value of 0.98. There was a trend for oral motricity assessed by asking the patient to grip teeth to predict the necessity of reintubation (0.22, [0.04; 1.23], p = 0.08).
Conclusion.– Normal GSP as well as presence of one or both gag reflexes is predictive of absence of reintubation in relation to aspiration and excess upper airway secretions. Our high rate of reintubation is probably due to the intubation delay, it will be interesting to perform a study with patient intubated 48 hours at least.
http://dx.doi.org/10.1016/j.rehab.2013.07.399

CO58-004-e

Treatment of the scapulohumeral dislocation due to rotator cuff syndrome: A comparative study between a manual relocating technique and a shoulder rehabilitation device
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Keywords: Dislocation; Shoulder; Rehabilitation
Aim.– Investigate the effect of analytical manual therapy relocating techniques realized by Sohier [1] (METHOD-1) on scapula-humeral joint amplitudes and its comparison to an operator-independent shoulder rehabilitation device (METHOD-2).
Participants.– Twenty right-handed subjects (22 ± 5 ans), with no previous shoulder injuries within the past two years (Kapandji test). Mild pain was triggered among 18 subjects in the posterior passage way. The examination was completed by a “Japanese Orthopaedic Association Shoulder Score” (JOASS), which revealed scores ranging between 71.6 and 88.42%. 1a subjects completed 4 × 20 pulling (30s rest) with METHOD-2 while the other group completed METHOD-1.
Materials.– One inclinometer (3B Scientific) allowing to measure the shoulder joint amplitude and a shoulder rehabilitation device. The affect was assessed by using an affect perception scale «Self Assessment Manikin» (SAM) [2]. Besides, a Borg-CR10 [3] was used to assess the pain perception.
Methods.– The participants were asked to complete a test, relocating maneuver (METHOD-1 or METHOD-2), and a restest after 6-8 days. The measured variables were the angles of abduction, elevation, medial and lateral rotation, and the scores obtained for the SAM and Borg-CR10 scales. A paired Student-T test was carried out in order to compare the test and restest results (p < .05).
Results.– The data analysis revealed a decrease in Borg-CR10 Scale (0.9) and an increase in SAM scale (1.5) in METHOD-1 participants. Comparable results were observed in METHOD-2 subjects with scale values of 1.25 and 1.7, respectively. The gains of amplitude in METHOD-1 participants [from 5.4 to

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7.6%) were significantly higher than those obtained in METHOD-2 subjects (2% 3.4%) (p < .05).

Discussion.– The current study confirmed the actual relocating effects when using METHOD-1 [1]. However, METHOD-2 increased the affect and decreased the pain perception without applying relocating effects for the scapula-humeral joint. METHOD-2 seems to have more peripheral effects than relocating role.

References

http://dx.doi.org/10.1016/j.rehab.2013.07.400

CO58-005-e

Rotator cuff: Rehabilitation in a closed chain, Concept 3 C

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Keywords: Shoulder; Rotator cuff; Closed chain; Innovation; Rehabilitation

Introduction.– A maneuver refocusing glenohumeral active closed chain improves the centering of the glenohumeral joint [1].

– HAS recommends muscular strength training in the rehabilitation of the shoulder (pathology of non-operated rotator cuff) [2].

The combination of these two concepts is the origin of an innovative device: Scapuleo.

Objective.– Evaluation of the effectiveness of the rehabilitation of the shoulder as per the 3 C Concept (Concept of Centering in a Closed Chain).

Material/methods and patients.– Soixante-six shoulders tendinopathy (single, broken and calcifying) of non-operated cuff, reeducated on Scapuleo, according to the 3 C concept.

Age: 54 (16-82).

Sex: 24 men/52 women.

Excluded: capsulitis, AT, biceps tendinitis, fractures involving the supraspinatus and subscapularis. Means of evaluation:

– calculation of the Constant-Murley score weighted initial (SCPI) and final value (SCPF);

– rehabilitation protocol: the 3 C Concept includes;

– an active-rehabilitation with Scapuleo (20 minutes): painless overall work, pushing and/or pulling in a closed chain, alternating with rest and hand on the thigh;

– passive mobilization (5-10 minutes) of the shoulder and muscle easing (adductor, posterior cuff...) and if necessary a treatment of contractures (Jones, myositis).

Duration: On average 19 sessions (15 weeks).

Results.– On average, the SCP increases from 69% to 96%.

For the 28 most injured shoulders with the SCP increases from 48 to 84% after 21 sessions (12-40):

– 53 patients were interviewed (SCPI 72%, SCPF 98%) 12 months (6-18) after the end of treatment.

Stability for 48 patients (90%).

Pain-Average: 1.6/10 (0 for 29 patients).

– five had another treatment, one self-rehabilitates.

Discussion.– Rehabilitation of the shoulder in closed chain, according to the Concept 3 C improves sustain the Constant-Murley score.

Subacromial impingement syndrome and pain are reduced. Anatomical and physiological explanations are identical to those of the maneuver [1].

Randomised controlled studies should confirm these preliminary results.

References

http://dx.doi.org/10.1016/j.rehab.2013.07.401

CO58-006-e

Effect of a robot-assisted gait session for patients with decreased knee flexion during swing phase

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Keywords: Tri-dimensional motion analysis; Body weight support (BWS); Robot-assisted gait; Hemiplegia; Total knee arthroplasty (TKA)

Introduction.– The main objective of gait training on robot-assisting gait (Lokomat®) is to improve the quality of gait patients (Lampire N et al., 2011). Hemiplegic patients and patients holding total knee arthroplasty (TKA) are two populations with frequent gait disorders, including a deficit of peak knee flexion in swing phase (Péliissier J et al., 1997, McClelland JA et al., 2007). We wanted to objectify the Lokomat® session specific effects in each of these populations.

Method.– A tri-dimensional motion analysis was recorded before and immediately after a Lokomat® training session. The main parameters to analyze were peak knee flexion in swing phase, the spatial and temporal parameters.

Results.– The study is in progress. Currently, 16 subjects with hemiplegia and 8 subjects holding a TKA were included. The peak knee flexion was not significantly improved in the two populations. On hemiplegic patients, Lokomat® training session improves spatial and temporal parameters. None of the parameters were significantly improved in the population of subjects holding a TKA.

Discussion-conclusion.– The two populations had very different characteristics, one suffering from neuro-motor disorders and the other orthopedic disorders only. We expected an improvement in peak knee flexion in both populations, especially in patients who underwent TKA, free of neuro-motor disorders. In both populations, the peak knee flexion is not improved. For patients undergoing TKA, pain is to take into account and may explain the lack of difference after the Lokomat® session. For hemiplegic patients, improved spatial and temporal parameters showed a change in gait after the session, in connection with the pace with the Lokomat®, but the integration of proprioceptive sensations is not highlighted on one a session: peak knee flexion is not changed. Then it would be interesting to study the quality and quantity of feedback given to the patient during the session.

http://dx.doi.org/10.1016/j.rehab.2013.07.402

Communications affichées

Version française

P163-f

Cervicalgies du sportif et techniques myotensives

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Mots clés : Cervicalgie ; Sport ; Techniques myotensives


L’évaluation de la douleur a été réalisée avant puis un mois après le début de la rééducation.

Résultat.– Après cinq séances de rééducation spécifique comportant des techniques myotensives, nous avons noté une amélioration de la symptomatologie douloureuse chez 17 patients.