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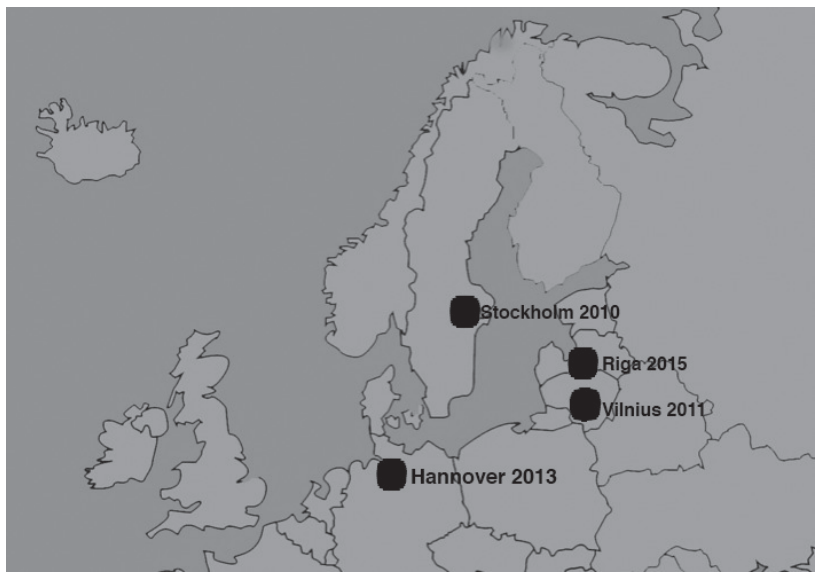

Baltic & North Sea Conferences on PRM

TABLE OF CONTENTS

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physiotherapy procedures. Decreased depression and improved self-perception ($p<0.05$). It was found that urination and defecation disorder symptoms decreased. Pressure feedback showed the improvement in pelvic floor muscles strength, that means that the majority of the patients learned to perform regular pelvic floor muscles contraction without engaging assistant muscles.

E. CARDIOVASCULAR AND PULMONARY REHABILITATION

PP36

EFFECTIVENESS OF DIFFERENT PHYSIOTHERAPY METHODS FOR PATIENTS WITH INCREASED CARDIOMETABOLIC RISK

Ieva Slivovskaja, MedDr, Jurgita Buzinskaite, PT
Vilnius University Hospital Santariskiu Klinikos, Vilnius, Lithuania

Introduction: Every year over the world about 16.7 million people die from cardiovascular diseases (World Health Organization). World Health Organization experts announce the prognosis that in 2020 more than 70% of all cases of diseases will be caused by inappropriate human lifestyle and mostly by deficient physical activity. A growing number of evidence based on research show that regular aerobic training and physical exercises increase human physical capacity (Jones, Cartier; Ziemann et al.), reduce the risk of developing various diseases (Meyers et al.; Kodama et al.; Martinmäki et al.; Ross Bradshaw), and improve quality of life (Garatachea). The aim of the study was to analyze the effectiveness of different methods of physiotherapy for patients' with increased cardiovascular risk muscular strength and endurance and physical capacity. *Methods:* Thirty-nine patients (age range 40–64 years) with increased cardiovascular risk participated in the study. The participants were divided into two groups: the study group ($n=20$) and the control group ($n=19$). Patients of the study group performed aerobic workouts ($n=10$) and muscular endurance workouts ($n=10$). Patients in the control group had only aerobic workouts ($n=20$). The participants' muscle strength, abdominal and back muscle static endurance and physical capacity were evaluated. *Results:* The results showed that after training the study group patients' muscle strength was significantly higher than in the control group ($p<0.05$). The endurance of abdominal and back muscle of the study group was after a complex training significantly higher than in the control group after only aerobic training ($p<0.05$). A statistically significant improvement of physical capacity according to MET was assessed in both groups ($p<0.05$). *Conclusion:* The results show that for patients with increased cardiovascular risk, the combined application of aerobic workouts and strength training is more effective than only aerobic workouts on the increase of abdominal and b ack muscle strength and endurance. The lower number of aerobic training (replacing part of training with strength training) in the study group did not affect the final results of physical capacity compared to the control group.

PP37

PULMONARY REHABILITATION IN COPD EXACERBATION: IS UPPER LIMBS EXERCISE TRAINING SAFE AND EFFECTIVE?

Dulce Ferreira, Master[1], Eugénia Mendes, Master[2], André Novo, Dr[2], Leonel Preto, Dr[2], Bruno Noronha, Licence[1]
[1]Centro Hospitalar de Lisboa Central, Lisboa, [2]School of Health, Polytechnic Institute of Bragança, Bragança, Portugal

Pulmonary rehabilitation in chronic obstructive pulmonary disease (COPD) exacerbation has several advantages such as reduction of hospital readmission and mortality, the considerable increase of quality of life and functional improvement translated into a better outcome in the 6 min walking test. Upper limbs exercise is recommended in pulmonary rehabilitation guidelines because it reduces stress, decreases dyspnea and dynamic hyperinflation and improves functional capacity with impact on daily living activities. This study aimed to evaluate the functional changes that occur in COPD patients with exacerbation, after a program of resistance exercises of the upper limbs. A multi-case study was developed on seven patients with COPD, GOLD III and IV (diagnosed by FEV) in exacerbation. Data collection included an initial interview for clinical history, functional assessment using the London Chest Activity of Daily Living (LCADL), the 6 min Pegboard and Ring Test (6min PBRT), handgrip strength and the Saint George Questionnaire for quality of life assessment. A program of upper limbs exercise training was implemented. Vital signs (blood pressure, respiratory rate, heart rate and pain, dyspnea (Borg Dyspnea Scale) and peripheral oxygen saturation were assessed before and after exercise training and during if the patient presented any symptom. After 7 days of treatment, assessment instruments were applied. All 7 participants (2 women, 5 men), aged between 50 and 85 years, had as risk factor being exsmokers. The entire group has several comorbidities (diabetes, heart problems, anxiety/depression, osteoporosis) and low inclusion in rehabilitation or exercise programs. Upper limbs exercise during an exacerbation period appeared to be safe and beneficial in all of the cases studied. Vital signs, dyspnea and peripheral oxygen saturation remain on normal range during exercise training sessions. Data obtained in 6min PBRT, LCADL and handgrip strength showed a positive evolution between assessments in all participants resulting in an improvement of exercise capacity of the upper limbs and in an increase of their functionality. There was no significant changes in quality of life. The results may indicate that the inclusion of resistance active exercises in rehabilitation programs tend to improve skeletal muscle strength and performance in ADL.

PP38

INTERVENTION IN CARDIAC REHABILITATION: IS EXERCISE TRAINING EFFECTIVE IN DECOMPENSATED HEART FAILURE PATIENTS?

Bruno Delgado, Master[1], André Novo, Dr[2], Maria Filomena Oliveira, Master[1], Leonel Preto, Dr[2], Eugénia Mendes, Master[2]
[1]Centro Hospitalar do Porto, Porto, [2]School of Health, Polytechnic Institute of Bragança, Bragança, Portugal

Heart failure is characterized, from a functional point of view, as a pathology that causes limitations in carrying out the activities of daily living and consequent loss of functional and instrumental autonomy due to its classic symptoms such as: dyspnea, edema, easy tiredness and intolerance to activity. These symptoms make the patient become increasingly dependent and searching for inactivity as a way to preserve energy and avoid those symptoms. It is known that exercise is beneficial and safe when applied according to the characteristics of the patient and his medical condition, even in the process of stabilization of the acute phase of its pathology. Through the exploratory method, clinic and physiologic variables have been identified that could change with exercise and which allow a better response to exercise in the acute phase of the disease. Patients with decompensated heart failure of a cardiology ward were selected to comply with a minimum of 3 sessions of a program of physical exercise with increasing levels of intensity. Vital signs, Borg scale to subjective perception of effort and the London Chest Activity Daily Living (LCADL) scale for dyspnea associated with activities of daily living were assessed before and after the implementation of the program. Intensity and progression on the program were also evaluated by exercise parameters such as number of laps on the exercise peddler, number of meters walked and number of