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The Use of Actigraphy and its Impact on Perceived Sleep Quality and Activity Levels in Individuals With Traumatic Brain Injury in an Inpatient Rehabilitation Setting.

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nature. More research especially on the biomechanical and kinematic factors is needed to better understand and treat this condition.

"TEST SMART, TREAT SMART (TS2)" INTERVENTION TO OPTIMIZE BACTERIURIA MANAGEMENT AFTER SPINAL CORD INJURY

Felicia Skelton, MD, MS, Casey Hines-Munson, BS, Sarah May, MS, Annette Walder, MS, S. Ann Holmes, MD, Ivy Poon, PHARM.D, and Barbara Trautner, MD, PhD

OBJECTIVES: 1) Describe the refinement of a validated intervention to reduce treatment of asymptomatic bacteriuria (ASB) for spinal cord injury (SCI) providers. 2) Describe the creation of a neurogenic bladder and urinary tract infection (UTI) symptom monitor tool for patients with SCI.

DESIGN: Intervention mapping and development using iterative design. Intervention mapping is a process to develop theory- and evidence-based interventions, and involves 6 steps: 1) needs assessment; 2) identification of change objectives; 3) selection of theory-based intervention methods and practical applications to enact change; 4) development of intervention components; 5) intervention adoption, implementation, and maintenance plan; and 6) plan for evaluation of intervention effectiveness. Previous studies related to this research have completed steps 1-3; this study focuses on step 4.

RESULTS: Based on the results of our mixed methods studies looking at SCI provider and patient knowledge, attitudes and behaviors around current urine testing and treatment practices at the SCI annual exam (AE), we have developed interventions that include:

Provider intervention: Intervention kick-off: introduces TS2 algorithm to providers, teaching cases to help identify UTI from ASB, introduces SCI-specific antibiogram to aid in antibiotic choice; During the AE: change clinic processes to ensure labs and imaging done prior to clinic visit, change EMR order set to include a urinalysis but not urine culture, and decision support tool in the EMR with TS2 algorithm; Post-AE: monthly audit and feedback of real cases to reinforce learning. Patient intervention: Patient education handout on neurogenic bladder: management, true signs and symptoms of UTI, understanding risks and benefits of antibiotic use; Using validated bladder symptom checklist embedded into EMR during visit.

CONCLUSIONS: We have developed evidence-based patient and provider interventions to minimize unnecessary urine testing and treatment after SCI, as a means to spare these vulnerable patients unnecessary antibiotic use. The next step in this project is to complete a feasibility trial of the intervention at a single VHA site.

THE EFFECT OF 65 HZ ELECTROSTIMULATION ON URINARY INCONTINENCE, PELVIC FLOOR MUSCLE STRENGTH AND IMPACT ON DAILY LIFE OF PATIENTS AFTER RADICAL PROSTATECTOMY: DOUBLE-BLIND RANDOMIZED CONTROLLED TRIAL

Patricia Z. Zaidan, DR, and Elirez B. Bezerra da Silva, PROFESSOR DOUTOR

OBJECTIVES: To verify the effect of 65 Hz electrostimulation on UI, pelvic floor muscle strength and the impact of UI on the daily life of patients with sphincter deficiency, resulting from radical prostatectomy surgery

DESIGN: The study was an experiment with active, randomized, double-blind, parallel-intervention control.

RESULTS: The relative risk (RR) and ANOVA 3X2 were used for the statistical analysis of the data. The relative risk of UI of the EE65 + EMAP Group in relation to the EMAP Group was equal to 0.48 (95% CI 0.31 to 0.73), while the relative UI risk of the EE50 + EMAP Group in relation to the EMAP Group was equal to 0, 89 (95% CI 0.77 to 1.04).

CONCLUSIONS: The frequency of 65 Hz was more effective than that of 50 Hz in the recovery of urinary continence and in reducing the impact of UI on the ADLs of prostatectomized men.

THE ROLE OF PLATELET RICH PLASMA AND AUTOLOGOUS WHOLE BLOOD INJECTION UNDER ULTRASOUND GUIDANCE IN THE TREATMENT OF LATERAL EPICONDYLITIS

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OBJECTIVES: To determine the effectiveness of PRP (platelet rich plasma) compared with autologous whole blood injections in patients with chronic lateral epicondylitis.

DESIGN: A hospital based randomized prospective interventional study.

RESULTS: The proportion of patients whose symptoms improved was higher in the PRP group compared to the autologous blood group.

CONCLUSIONS: Both PRP and autologous whole blood were effective in reducing the pain and increasing function in the patients affected by lateral epicondylitis. Maximum benefit of pain relief was found to be evident 4 weeks after the intervention using either PRP or ABI.

THE USE OF ACTIGRAPHY AND ITS IMPACT ON PERCEIVED SLEEP QUALITY AND ACTIVITY LEVELS IN INDIVIDUALS WITH TRAUMATIC BRAIN INJURY IN AN INPATIENT REHABILITATION SETTING

Lina Shkokani, BS, Amanda Reyes, MD, Bachar Hazim, MD, Jason Kissner, PhD, and P. Tyler Roskos, PhD

OBJECTIVES: The purpose of this study was to examine sleep quality, activity levels, and rehabilitation outcomes in patients with Traumatic Brain Injury (TBI) participating in inpatient neuro-rehabilitation.

DESIGN: For 6 consecutive days, subjective ratings of sleep quality, measured using the Pittsburgh Sleep Quality Index, and activity levels were collected from patients with TBI (N=4) by a trained rater. Gait distance measures by physical therapy were also collected daily. Participants were asked to wear a Fitbit device on days 3 and 4 only. Activity and sleep variables from the Fitbit were recorded. Patients' medical records were reviewed for demographic data, clinical characteristics, and rehabilitation outcomes (measured by Care Tool scores and length of stay) at admission and discharge.

RESULTS: 4 participants (3 males and 1 female) with mild TBI completed the study and preliminary results supported statistically significant trends between data collected via Fitbit and participants' ratings of their functioning (e.g. ratings of sleep quality correlated with number of steps taken; $R=-.99$; $p<.01$; and active minutes; $R=-.94$; $P=.05$; and steps taken correlated with ratings of pain before bed; $R=.98$; $p=.01$). Fitbit metrics also correlated significantly with length of stay (e.g. number of steps on day 3; $R=.95$; $p<.05$) and Care Tool scores (e.g. time slept at night on day 3; $R=.99$; $p<.05$). We also observed trends of statistically significant correlations between participants' estimates of their sleep quality and rehabilitation outcomes (e.g. number of hours slept at night and Care Tool scores at admissions and discharge; ranging from $R=-.95$ -.99; $p<.05$).

CONCLUSIONS: These initial data suggest relationships between participants' perceptions of their sleep and activity levels, objective data collected from an actigraphy device, and rehabilitation outcome measures. Given the low sample size at present, the implications of these findings are not fully understood, but it is expected that further data collection will yield meaningful results.

THERAPY CONSULTS AND LENGTH OF STAY IN ELDERLY PNEUMONIA

Ryan H. Berry, MD, Subha Hanif, MD, Sara Rosenblum, MD, and Bhagyalakshmi Policherla, MD

OBJECTIVES: To examine the relationship of physical therapy with length of stay in elderly patients admitted for pneumonia.

DESIGN: Retrospective chart review of ninety-two patients over the age of 75-years-old admitted to a 395-bed community hospital between January 2017 and December 2018. Presence of physical therapy consult distinguished groups, and length of stay served as primary outcome.

RESULTS: In our study of ninety-two elderly patients diagnosed with pneumonia, the physical therapy consult group of sixty-one patients showed a greater average hospital stay (+1.99 days 95% CI [0.43, 3.55]), frequency of social work consult, $\times 2$ (2, N=92) = 20.21, $p = 0.000007$, and frequency of rehabilitation disposition, $\times 2$ (2, N=92) = 13.37, $p = 0.001$. Since social work consults and rehabilitation dispositions independently related to longer stays (+2.07 days [0.60, 3.54]; +3.18 days [1.72, 4.64], respectively), we excluded cases with the variables and repeated our study. Subset analysis of thirty-nine patients no longer showed a significantly longer stay in the physical therapy group of twenty patients (+0.84 days [-0.68, 2.36]). No significant differences were noted between the physical therapy consult and non-consult groups in terms of pneumonia severity, comorbidities prior functional level, age, sex, race, or insurance status.

CONCLUSIONS: In our study, elderly pneumonia patients who receive physical therapy do not average shorter stays. Our focus on presence, not timing, of physical therapy may explain discrepancy with past study. We also identify social work and discharge placement as independent associators with longer stays. Findings may aid design of trials that define physical therapy's role in pneumonia care.