Parkinson's Disease

Current Awareness Bulletin

October 2011

For any references where there is a link to the full text please use your NHS Athens username & password to access. (if you need any help with this please let us know)

If you would like any of the full references from those that do not have links please let us know & we will source them for you.

Academy Library x4897 or ruh-tr.library@nhs.net

Jason Ovens
Library & Knowledge Service Manager

References from the Cochrane Library

Meta-analysis of the comparative efficacy and safety of adjuvant treatment to levodopa in later Parkinson's disease

Original article: Stowe R, Ives N, Clarke CE, Handley K, Furmston A, Deane K, van Hilten JJ, Wheatley K, Gray R. Meta-analysis of the comparative efficacy and safety of adjuvant treatment to levodopa in later Parkinson's disease. ***Movement Disorders***.2011;**26**(4):587-598

Recent References from Amed (a database for AHPs)

Title: Psychometric properties of activity, self-efficacy, and quality-of-life measures in individuals with Parkinson disease

Citation: Physiotherapy Canada, December 2011, vol./is. 63/1(47-57), 0300-0508 (2011 Winter)
Author(s): Dal Bello-Haas V, Kiassen L, Sheppard MS, Metcalfe A

Abstract: Purpose: To examine the psychometric properties of six outcome measures in people with Parkinson disease (PD) Method: Twenty four participants completed the following twice within 2 weeks the timed up and go test (TUG) Northwestern University Disability Scale (NUDS) Schwab & England ADL Scale (S&E). Activities specific Balance Confidence (ABC) Scale PD Questionnaire - Short Form (PDQ 8) and Stanford Self-Efficacy for Managing Chronic Disease 6 Item Scale (S&E). Internal consistency test-retest reliability (ICC[3,1]) and minimal detectable change (MDC) scores were calculated. Convergent and discriminant validity of the ABC were examined. Results: Cronbach's alpha scores for the NUDS ABC PDQ-8 and SSE were 0.47, 0.92, 072 and 0.91 respectively. The intra class correlation coefficient (ICC[3 1]) for the TUG was 069 and could be improved by averaging two trials ICCs for the NUDS S&E ABC PDQ-8 and SSE were 0.56, 0.70, 0.79, 0.82 and 0.72 respectively. The ABC correlated with the TUG (r= -0.44 p = 0.03) and with PDQ-8 (r8 = 0.51, p = 0.01) and NUDS (r8 = 0.48, p = 0.02) walking items. The ABC was able to discriminate between stages 1 and 3 of disease progression but not between stages 1 and 2 which suggests that the ABC can distinguish large differences in disease progression but cannot detect more subtle differences. Conclusions: Homogeneity of the ABC, PDQ-8 and SSE is good to excellent. Test-retest reliability scores of all measures except the NUDS are moderate to good. The ABC is a valid measure for use in PD The MDC statistic may be useful for interpreting group score changes.

Title: The impact of attentional, auditory, and combined cues on walking during single and cognitive dual tasks in Parkinson disease

Citation: Gait and Posture, March 2011, vol./is. 33/3(478-83), 0966-6362 (2011 Mar)
Author(s): Lohnes CA, Earhart GM

Title: Psychometric properties of activity, self-efficacy, and quality-of-life measures in individuals with Parkinson disease

Citation: Physiotherapy Canada, December 2011, vol./is. 63/1(47-57), 0300-0508 (2011 Winter)
Author(s): Dal Bello-Haas V, Kiassen L, Sheppard MS, Metcalfe A

Abstract: Purpose: To examine the psychometric properties of six outcome measures in people with Parkinson disease (PD) Method: Twenty four participants completed the following twice within 2 weeks the timed up and go test (TUG) Northwestern University Disability Scale (NUDS) Schwab & England ADL Scale (S&E). Activities specific Balance Confidence (ABC) Scale PD Questionnaire - Short Form (PDQ 8) and Stanford Self-Efficacy for Managing Chronic Disease 6 Item Scale (S&E). Internal consistency test-retest reliability (ICC[3,1]) and minimal detectable change (MDC) scores were calculated. Convergent and discriminant validity of the ABC were examined. Results: Cronbach's alpha scores for the NUDS ABC PDQ-8 and SSE were 0.47, 0.92, 072 and 0.91 respectively. The intra class correlation coefficient (ICC[3 1]) for the TUG was 069 and could be improved by averaging two trials ICCs for the NUDS S&E ABC PDQ-8 and SSE were 0.56, 0.70, 0.79, 0.82 and 0.72 respectively. The ABC correlated with the TUG (r= -0.44 p = 0.03) and with PDQ-8 (r8 = 0.51, p = 0.01) and NUDS (r8 = 0.48, p = 0.02) walking items. The ABC was able to discriminate between stages 1 and 3 of disease progression but not between stages 1 and 2 which suggests that the ABC can distinguish large differences in disease progression but cannot detect more subtle differences. Conclusions: Homogeneity of the ABC, PDQ-8 and SSE is good to excellent. Test-retest reliability scores of all measures except the

NUDS are moderate to good. The ABC is a valid measure for use in PD The MDC statistic may be useful for interpreting group score changes.

Title: Everyday executive function is associated with activity participation in Parkinson disease without dementia

Citation: OTJR Occup Particip Health, December 2011, vol./is. 31/1 Suppl, 1539-4492 (2011 Winter)
Author(s): Foster ER, Hershey T

Abstract: Individuals with Parkinson disease (PD) who do not have dementia reliably demonstrate mild executive deficits on laboratory-based tests, but the impact of these deficits on occupational performance is unclear. The purpose of this study was to determine the relevance of executive dysfunction in PD without dementia to instrumental, leisure, and social activity participation. Twenty-four individuals with PD and 30 matched adult volunteers performed an experimental working memory test and rated their everyday executive function and activity participation. Participants with PD had worse working memory performance, tended to report more everyday executive problems, and reported lower activity participation compared to controls. Within PD, lower everyday executive function was associated with reduced activity participation after controlling for motor dysfunction and depressive symptoms. Executive function is an independent predictor of complex activity participation in early PD. These results suggest the need for occupational therapists to consider executive dysfunction during evaluation and treatment of individuals with PD.

Full Text:
Available in *fulltext* at ProQuest (Legacy Platform

Title: Modified constraint-induced movement therapy improves fine and gross motor performance of the upper limb in Parkinson disease

Citation: American Journal of Physical Medicine and Rehabilitation, May 2011, vol./is. 90/5(380-6), 0894-9115 (2011 May)
Author(s): Lee KS, Lee WH, Hwang S

Abstract: Objective: The purpose of this study was to examine the effect of modified constraint-induced movement therapy on hand and arm functions in people with Parkinson disease. Design: Twenty individuals with Parkinson disease participated in the study. The experimental group (ten subjects) performed modified constraint-induced movement therapy for 4 wks (3 hrs/day, 5 days/wk), whereas the control group performed general upper limb exercises on the same schedule. The outcome measures both pretest and posttest were the box and block test, Fugl-Meyer assessment, and action research arm test. Results: The scores for the box and block test in the experimental group increased from 35.8 +/- 2.6 to 44.8 +/- 3.4 after training. Total scores for the Fugl-Meyer assessment in the experimental group significantly increased from 33.6 +/- 1.5 to 53.7 +/- 3.1 after training. Greater improvement in action research arm test scores were observed in the experimental group (from 35.1 +/- 4.9 to 50.8 +/- 3.6) than in the general exercise group (from 33.1 +/- 2.2 to 34.8 +/- 2.7). Conclusions: Modified constraint-induced movement therapy improves fine and gross motor performances of the upper limb in people with Parkinson disease. Therefore, the therapy would be recommended as an effective treatment for them.

Title: Postural instability/gait disturbance in Parkinson's disease has distinct subtypes: An exploratory analysis

Citation: Journal of Neurology, Neurosurgery and Psychiatry, May 2011, vol./is. 82/5(564-8), 0022-3050 (2011 May)
Author(s): Factor SA, Steenland NK, Higgins DS, Molho ES, Kay DM, Montimurro J, Rosen RR, Zabetian CP, Payami H

Abstract: Objective: To test the hypothesis that postural instability with falling (PIF) and freezing of gait (FOG) are distinct subtypes of the postural instability/gait disturbance (PIGD) form of Parkinson's disease (PD). Methods: 499 PD subjects from the NeuroGenetics Research Consortium were studied using logistic regression to examine, in a cross sectional analysis, predictors of FOG and PIF. Potential predictors were from four spheres; demographic, clinical motor, clinical non-motor and genetic. Results: FOG and PIF were both associated with greater gait subscores and lower tremor subscores on the Unified Parkinson's Disease Rating Scale (p/=0.02). However, they differed with regard to demographic, non-motor and genetic predictors. FOG was associated with greater duration of disease, with ORs of 3.01 (95% CI 1.35 to 6.72) and 4.91 (95% CI 2.29 to 10.54) for third and fourth quartiles of duration, respectively, versus the lowest half of duration. The risk of having psychotic symptoms was also significantly increased (OR 3.02, 95% CI 1.41 to 6.49; p=0.004). FOG was inversely associated with the presence of the CYP2D6*4 allele (OR 0.41, 95% CI 0.21 to 0.80; p=0.009) suggesting a protective effect. PIF was associated with depression (OR 1.08, 95% CI 1.01 to 1.15; p<0.02) and was inversely associated with APOE epsilo4 (OR 0.21, 95% CI 0.05 to 0.87; p=0.03), again suggesting a protective effect. Conclusion: FOG and PIF have different demographic, non-motor and genetic predictors suggesting that they may be pathophysiologically distinct subtypes of PIGD. These findings have implications in the discovery of therapeutic targets for these disabling features as well as for predicting outcomes of PD.

Full Text:
Available in *fulltext* at Highwire Press

Title: Methylphenidate for gait impairment in Parkinson disease: A randomized clinical trial

Citation: Neurology, April 2011, vol./is. 76/14(1256-62), 0028-3878 (2011 Apr 5)
Author(s): Espay AJ, Dwivedi AK, Payne M, Gaines L, Vaughan JE, Maddux BN, Slevin JT, Gartner M, Sahay A, Revilla FJ

Abstract: Background: There is a paucity of therapies for gait impairment in Parkinson disease (PD), Open-label studies have suggested improved gait after treatment with methylphenidate (MPD). Objective: To evaluate the efficacy of MPD for the treatment of gait impairment in PD. Methods: Twenty-seven subjects with PD and moderate gait impairment were screened for this 6-month placebo-controlled, double-blind study. Subjects were randomly assigned to MPD (maximum, up to SD mg/day) or placebo for 12 weeks and crossed over after a 3-week washout. The primary outcome measure was change in a gait composite score (stride length + velocity) between groups at 4 and 12 weeks. Secondary outcome measures included changes in motor function, as measured by the Unified Parkinson's Disease Rating Scale (UPDRS), Freezing of Gait Questionnaire (FOG, number of gait-diary freezing episodes, and measures of depression, sleepiness, and quality of life. Three-factor repeated-measures analysis of variance was used to measure changes between groups. Results: Twenty-three eligible subjects with PD were randomized and 17 completed the trial. There was no change in the gait composite score or treatment or time effect for any of the variables. Treatment effect was not modified by state or study visit. Although there was a trend for reduced frequency of freezing and shuffling per diary, the FOGQ and UPDRS scores worsened in the MPD group compared to placebo. There was a marginal improvement in some measures of depression. Conclusions: MPD did not improve gait and tended to worsen measures of motor function, sleepiness, and quality of life.

Full Text:
Available in *fulltext* at Ovid

Title: Disability and profiles of functioning of patients with Parkinson's disease described with ICF classification

Citation: International Journal of Rehabilitation Research, June 2011, vol./is. 34/2(141-50), 0342-5282 (2011 Jun)
Author(s): Raggi A, Leonardi M, Ajovalasit D, Carella F, Soliveri P, Albanese A, Romito L

Abstract: The objective of this study was to describe the functional profiles of patients with Parkinson's disease (PD), and the relationships between impairment in body functions, limitations in activities, and environmental factors, using the World Health Organization's International Classification of Functioning, Disability, and Health (ICF). Patients were consecutively enrolled, and the ICF checklist was administered. Two count-based indices were developed: 'extension', containing ICF categories rated with qualifiers 1-4 and 'severity', containing ICF categories rated with qualifiers 3-4. Categories rated with qualifiers 1-4 in at least 50% of patients are described separately. Spearman's correlation analysis was carried out to identify the relationships between impairments in body functions (BF) and body structures, activities and participation, and environmental factors (EF); linear regressions were performed to identify the best predictors of performance indices in activities and participation. A total of 96 patients were enrolled; 34 categories rated with qualifiers 1-4 in at least 50% of patients are reported, and most of them describe impairment in movement-related functions and limitations in mobility and self-care. Performance indices are significantly lower than capacity and significant relationships with both SF impairments and EF are observed. High difficulties in activities and participation performance are connected with both presence of severe BF symptoms and relevant barriers in EF. Both BF and EF play a relevant role in improving functioning of the patients with PD. The connection between EF barriers and severe problems in activities and participation performance suggests the need of fostering participation of patients with PD by promoting facilitators among EFs. Methodologies and tools are needed to couple information on symptoms, on the difficulties in executing activities, and on environmental features.

Title: Effects of virtual reality-augmented balance training on sensory, organization and attentional demand for postural control in people with Parkinson disease: A randomized controlled trial

Citation: Physical Therapy, June 2011, vol./is. 91/6(862-74), 0031-9023 (2011 Jun)
Author(s): Yen CY, Lin KH, Hu MH, Wu RM, Lu TW, Lin CH

Language: English

Abstract: Background. There is a lack of studies related to virtual reality (VR)-augmented balance training on postural control in people with Parkinson disease (PD). Objective. The purposes of this study were: (1) to examine the effects of VR-augmented balance training on the sensory integration of postural control under varying attentional demands and (2) to compare the results with those of a conventional balance training (CB) group and an untrained control group. Design.

A longitudinal, randomized controlled trial was used. Setting. The intervention was conducted in the clinic, and the assessment was performed in a research laboratory. Patients. Forty-two people with PD (Hoehn and Yahr stages II-III) were recruited. Intervention. The VR and CB groups received a 6-week balance training program. Measurements. The sensory organization tests (SOTs) of computerized posturography with single- and dual-task conditions were conducted prior to training, after training, and at follow-up. Equilibrium scores, sensory ratios, and verbal reaction times (VRTs) were recorded. Results. There were no significant differences in equilibrium scores or VRTs between the VR and CB groups. However, the equilibrium scores in SOT-6 (ie, unreliable vision and somatosensation) of the VR group increased significantly more than that of the control group after training. The equilibrium scores in SOT-5 (ie, unreliable somatosensation with eyes closed) of the CB group also increased significantly more than that of the control group after training. Limitations. The functional significance of the improvements in equilibrium scores in the SOTs was not known, and the sample size was small. Conclusions. Both VR and CB training improved sensory integration for postural control in people with PD, especially when they were deprived of sensory redundancy. However, the attentional demand for postural control was not changed after either VR or CB training.

Full Text:
Available in *fulltext* at EBSCO Host
Available in *fulltext* at EBSCO Host
Available in *fulltext* at EBSCO Host
Available in *fulltext* at ProQuest (Legacy Platform)

Recent References from British Nursing Index (a UK database for nurses)

Title: 'I start my day by thinking about what we're going to have for dinner': a qualitative study on approaches to food-related activities among elderly men with somatic diseases.

Citation: Scandinavian J Caring Sciences, June 2011, vol./is. 25/2(227-34), 0283-9318 (2011 Jun)
Author(s): Kullberg, K, Bjorklund, A, Sidenvall, B

Abstract: Qualitative research in Sweden examining attitudes to food related activities among older men with somatic diseases living alone or with a partner. Interviews with participants aged 64-84 with Parkinson disease, rheumatoid arthritis or stroke examined their participation in and management of food preparation and grocery shopping and how they had adapted these activities because of the effects of their disease. 33 refs.

Title: Culturally competent care for Parkinson disease.

Citation: Nursing Clinics North America, June 2011, vol./is. 46/2(171-80), 0029-6465 (2011 Jun)
Author(s): Hermanns, M

Abstract: Qualitative ethnographic research in the USA into Parkinson disease patients' construction of their illness experience. Narrative interviews with Parkinson patients examined how they understood the causes of the disease and the impact on their lives. 25 refs.

Title: Parkinson's: treating the symptoms.

Citation: Br J Nursing, July 2011, vol./is. 20/14(852-7), 0966-0461 (2011 28 Jul)
Author(s): Lindahl, A, MacMahon, D

Abstract: Management of symptoms in Parkinson's disease using medication, surgical intervention and therapeutic treatment. Resources from the charity Parkinson's UK concerning timing of medication are presented and use of drugs including levodopa, dopamine agonists, glutamate agonists and anticholinergics, deep brain stimulation and therapies such as physiotherapy, occupational therapy and speech therapy are described. 20 refs.

Full Text:
Available in *fulltext* at EBSCO Host
Available in *fulltext* at EBSCO Host

Title: End-of-life care guidance for Parkinson's disease.

Citation: Br J Neuroscience Nursing, June 2011, vol./is. 7/3(565), 1747-0307 (2011 Jun/Jul)

Author(s): Lee, M

Abstract: End-of-Life Care series exploring palliative care for people living with long-term neurological conditions. The development by the National Council for Palliative Care (2011) of consensus end-of-life care guidelines for Parkinson disease. 4 refs.

Full Text:
Available in *fulltext* at EBSCO Host
Available in *print* at Bath Academy Library

Title: 'Living Well with Parkinson's': evaluation of a programme to promote self-management.

Citation: J Nursing & Healthcare of Chronic Illness, September 2011, vol./is. 3/3(222-33), 1752-9816 (2011 Sep)
Author(s): Mulligan, H, Arps, G, Bancroft, N

Abstract: Qualitative research in New Zealand evaluating 'Living Well with Parkinson's', a self-management programme for people with Parkinson disease (PD). Participants' perceptions of the programme, which included 6 seminars about PD, were examined using interviews. Participants' reasons for attending, and the perceived benefits of the programme, are discussed. 29 refs.

Title: Correlates of care relationship mutuality among carers of people with Alzheimer's and Parkinson's disease.

Citation: J Advanced Nursing, August 2011, vol./is. 67/8(1729-38), 0309-2402 (2011 Aug)
Author(s): Shim, B, Landerman, L, Davis, L

Abstract: Research in the USA exploring factors that over a 1-year period affected mutuality, the positive perception of the relationship between carer and care recipient, among people caring for Alzheimer disease and Parkinson disease sufferers. The impact on mutuality of factors including care recipient functional ability, years of caring and carer depressive symptoms was examined 47 refs.

Full Text:
Available in *fulltext* at Wiley

Title: Access to care services for rural dwellers with idiopathic Parkinson's disease

Citation: British Journal of Neuroscience Nursing, April 2011, vol./is. 7/2(494-6), 1747-0307 (2011 Apr-May)
Author(s): Walker R, Sweeney W, Gray W

Abstract: Background and aims: This study aimed to assess the care use of people with Parkinson's disease (PD) living in North Northumberland a mostly rural area of the UK. Methods: During a single home visit, 106 people with PD identified by a prevalence study were invited to complete a questionnaire and semi-structured interview, providing demographic information and details of care services currently used. Results: 75 people agreed to participate. Ten patients (13.3%) were living in institutional care, representing 1.8% of the total nursing and residential care population in the study area. Of the 65 patients living in their own homes, 18 (27.7%) had domestic home care services provided and 17 (26.2%) used personal home care services. Conclusions: Living in a rural area appeared to be no hindrance to accessing care services when they were required.

Full Text:
Available in *fulltext* at EBSCO Host
Available in *print* at Bath Academy Library

Recent References from Cinahl (a worldwide database for nurses & AHPs)

Title: Perceptions of cause and control in people with Parkinson's disease.

Citation: Disability & Rehabilitation, 01 August 2011, vol./is. 33/15/16(1409-1420), 09638288

Author(s): Eccles, Fiona J. R., Murray, Craig, Simpson, Jane

Abstract: Purpose. This study sought to investigate how people with Parkinson's disease ((PD)) perceived both the cause and their control of the disease. Method. Eleven people living with a diagnosis of idiopathic PD in the UK were recruited via Parkinson's disease nurse specialists and interviewed. Interviews were transcribed verbatim and themes were then extracted from the transcripts using interpretative phenomenological analysis ((IPA)). Themes which were well supported and novel are presented. Results. Three themes are presented. 1)) different types of causal attribution; 2)) perceptions of control of symptoms by medication; 3)) the secondary control process of adaptation with particular focus on acceptance and denial. Conclusions. Themes of cause and control arose in a number of ways throughout conversations with participants. The links between cause and control were not universal but rather occurred in subtle individual ways. Different strategies were used by participants so that control could be maintained, at least to some extent. However, a flexible and responsive social and healthcare system is required to support individuals appropriately.

Title: Measuring participation in individuals with Parkinson disease: relationships with disease severity, quality of life, and mobility.

Citation: Disability & Rehabilitation, 01 August 2011, vol./is. 33/15/16(1440-1446), 09638288
Author(s): Duncan, Ryan P., Earhart, Gammon M.

Abstract: Purpose. Our aims were to: (1) describe participation in people with Parkinson disease (PD), (2) evaluate the relationship between quality of life and participation and (3) determine the mobliity measures which are predictive of participation. Methods. Participants with idiopathic PD (n == 62) were tested off medication for participation (Activity Card Sort), quality of life (PDQ-39), disease severity (MDS-UPDRS) and mobility (Berg Balance Scale, Five Time Sit to Stand (FTSTS), Six Minute Walk, forward walking velocity, dual-task walking velocity and Freezing of Gait Questionnaire (FOGQ)). Relationships of all variables to participation were examined using Pearson correlations. Subsequent regression analysis was employed to determine the mobility measures which best predicted the participation. Results. Participants with PD retained, on average, 78.3%% (SD == 15.6%%) of total activities. Participation was negatively correlated with all PDQ-39 domains (r range −−0.36 to −−0.78, all p < 0.005) with the mobility domain having the strongest correlation. All mobility measures were significantly correlated with participation, with the final regression model including only FTSTS and FOGQ which combined explained 37%% of the variance in participation. Conclusions. Participation is highly related to mobility-related QOL and may be most impacted by ability to stand up from a chair and freezing of gait in those with PD.

Title: Effect of a yoga programme on an individual with Parkinson's disease: a single-subject design.

Citation: Disability & Rehabilitation, 01 August 2011, vol./is. 33/15/16(1483-1489), 09638288
Author(s): Hall, Emma, Verheyden, Geert, Ashburn, Ann

Abstract: Purpose. To investigate the effect of eight weekly yoga sessions on balance, mobility and reported quality of life of an individual with Parkinson's disease (PD). Furthermore, to test the methodology in order to inform future research. Method. A 69-year-old female with an 8-year history of PD (Hoehn and Yahr rating two) was selected for the study, which had a single subject ABA design. A 1-week baseline was followed by an 8-week period of weekly 60 min yoga classes and a further 5 weeks of treatment withdrawal. Main outcome measures used were Berg Balance Scale (BBS), Timed Up and Go (TUG) and the Parkinson's Disease Questionnaire-39 (PDQ-39); collected at baseline, before, during and after the intervention and at follow-up. Results. An improvement was noted in the BBS and TUG during the intervention phase; although these changes did not appear to be clinically significant. No change in quality of life as measured by the PDQ-39 was noted. Conclusions. The objective improvements in functional activities during the intervention period were not clinically significant. Subjectively, the participant gained much enjoyment and relaxation from the yoga classes. This study justifies the need for further studies using a larger sample size. Additionally, it will inform the methodological design.

Title: Palliative care in Parkinson's disease.

Citation: Nursing Times, 21 June 2011, vol./is. 107/24(22-25), 09547762
Author(s): Kernohan, George, Waldron, Mary, Hardyway, Dorothy

Abstract: Parkinson's disease is a progressive, neurodegenerative condition with no known cure. People with the condition can have complex palliative care needs similar to those of cancer patients. This article describes the four stages of Parkinson's disease, and illustrates how nurses can apply the principles of palliative care to support and care at each stage.

Full Text:
Available in *fulltext* at ProQuest (Legacy Platform)

Available in *print* at Bath Academy Library

Title: Sleep disturbance and impulsive-compulsive behaviours in Parkinson's disease.

Citation: Journal of Neurology, Neurosurgery & Psychiatry, 01 June 2011, vol./is. 82/6(620-622), 00223050
Author(s): O'Sullivan SS, Loane CM, Lawrence AD, Evans AH, Piccini P, Lees AJ

Full Text:
Available in *fulltext* at Highwire Press

Title: A family with parkinsonism, essential tremor, restless legs syndrome, and depression.

Citation: Neurology, 10 May 2011, vol./is. 76/19(1623-1630), 00283878
Author(s): Puschmann A, Pfeiffer RF, Stoessl AJ, Kuriakose R, Lash JL, Searcy JA, Strongosky AJ, Vilariño-Güell C, Farrer MJ, Ross OA, Dickson DW, Wszolek ZK

Abstract: BACKGROUND: Previous epidemiologic and genetic studies have suggested a link between Parkinson disease (PD), essential tremor (ET), and restless legs syndrome (RLS). METHODS: We describe the clinical, PET, and pathologic characteristics of an extensive kindred from Arkansas with hereditary PD, ET, and RLS. The pedigree contains 138 individuals. Sixty-five family members were examined neurologically up to 3 times from 2004 to 2010. Clinical data were collected from medical records and questionnaires. Genetic studies were performed. Five family members underwent multitracer PET. Two individuals with PD were examined postmortem. RESULTS: Eleven family members had PD with generally mild and slowly progressive symptoms. Age at onset was between 39 and 74 years (mean 59.1, SD 13.4). All individuals treated with l-dopa responded positively. Postural or action tremor was present in 6 individuals with PD, and in 19 additional family members. Fifteen persons reported symptoms of RLS. PET showed reduced presynaptic dopamine function typical of sporadic PD in a patient with PD and ET, but not in persons with ET or RLS. The inheritance pattern was autosomal dominant for PD and RLS. No known pathogenic mutation in PD-related genes was found. Fourteen of the family members with PD, ET, or RLS had depression. Neuropathologic examination revealed pallidonigral pigment spheroid degeneration with ubiquitin-positive axonal spheroids, TDP43-positive pathology in the basal ganglia, hippocampus, and brainstem, and only sparse Lewy bodies. CONCLUSION: Familial forms of PD, ET, RLS, and depression occur in this family. The genetic cause remains to be elucidated.

Title: Behavioral therapy to treat urinary incontinence in Parkinson disease.

Citation: Neurology, 10 May 2011, vol./is. 76/19(1631-1634), 00283878
Author(s): Vaughan CP, Juncos JL, Burgio KL, Goode PS, Wolf RA, Johnson TM 2nd

Abstract: OBJECTIVE: To assess the feasibility and efficacy of exercise-based behavioral therapy to treat urinary incontinence (UI) in older adults with Parkinson disease (PD). METHODS: Participants with PD >=50 years with >=4 UI episodes on a 7-day bladder diary were recruited from movement disorders clinics. In 5 visits over 8 weeks, participants learned pelvic floor muscle exercises using computer-assisted EMG biofeedback, and bladder control strategies including urge suppression. Bladder diaries were used to reinforce techniques and monitor the primary outcome of UI frequency. Secondary outcomes included additional reporting of lower urinary tract symptoms, symptom bother, and quality of life (QOL) using the International Consultation on Incontinence Questionnaire for overactive bladder (ICIQ-OAB). RESULTS: Twenty participants were enrolled (90% male, age 66.5 ± 6.2 [mean ± SD], with PD for 6.9 ± 5.4 years) and 17 completed the study. The median (interquartile range) weekly frequency of baseline UI episodes was 9 (4-11) and following intervention was 1 (0-3), representing an 83.3% reduction (45.5-100.0, p = 0.0001). QOL scores on the ICIQ-OAB improved from 71.1 ± 23.9 to 54.7 ± 15.4 (p = 0.002). CONCLUSIONS: In this uncontrolled pilot study of an exercise-based, biofeedback-assisted behavioral intervention, older participants with PD demonstrated statistically significant and clinically meaningful reductions in frequency of UI and improvement in QOL. Randomized controlled trials to assess behavioral therapies for UI in patients with PD are warranted. Classification of evidence: This study provides Class IV evidence that exercise-based, biofeedback-assisted behavioral intervention can reduce UI frequency in patients >50 years old with PD.

Title: No paradox, no progress: inverse cancer comorbidity in people with other complex diseases.

Citation: Lancet Oncology, 01 June 2011, vol./is. 12/6(604-608), 14702045
Author(s): Tabarés-Seisdedos R, Dumont N, Baudot A, Valderas JM, Climent J, Valencia A, Crespo-Facorro B, Vieta E, Gómez-Beneyto M, Martínez S, Rubenstein JL

Abstract: In the past 5 years, several leading groups have attempted to explain why individuals with Down's syndrome have a reduced risk of many solid tumours and an increased risk of leukaemia and testicular cancer. Niels Bohr, the Danish physicist, noted that a paradox could initiate progress. We think that the paradox of a medical disorder protecting against cancer could be formalised in a new model of inverse cancer morbidity in people with other serious diseases. In this Personal View, we review evidence from epidemiological and clinical studies that supports a consistently lower than expected occurrence of cancer in patients with Down's syndrome, Parkinson's disease, schizophrenia, diabetes, Alzheimer's disease, multiple sclerosis, and anorexia nervosa. Intriguingly, most comorbidities are neuropsychiatric or CNS disorders. We provide a brief overview of evidence indicating genetic and molecular connections between cancer and these complex diseases. Inverse comorbidity could be a valuable model to investigate common or related pathways or processes and test new therapies, but, most importantly, to understand why certain people are protected from the malignancy.

Full Text:
Available in *fulltext* at ProQuest (Legacy Platform)

Title: Utility and Limitations of Addenbrooke's Cognitive Examination-Revised for Detecting Mild Cognitive Impairment in Parkinson's Disease.

Citation: Dementia & Geriatric Cognitive Disorders, 01 July 2011, vol./is. 31/5(349-357), 14208008
Author(s): Komadina, Natalie C., Terpening, Zoe, Huang, Yue, Halliday, Glenda M., Naismith, Sharon L., Lewis, Simon J.G.

Abstract: Background/Aims: To evaluate the utility of the Addenbrooke's Cognitive Examination-Revised (ACE-R) as a screening tool for mild cognitive impairment in Parkinson's disease (PD-MCI). Methods: PD patients underwent comprehensive neuropsychological and neurological evaluations and ACE-R assessment. Results: The ACE-R was superior to the Mini-Mental State Exam (MMSE) in detecting PD-MCI, with a cutoff score of ≤93 offering a sensitivity of 61% and a specificity of 64%. The utility of the ACE-R in detecting PD-MCI is largely influenced by the fluency sub-domain score, and has optimal discriminability when utilized in patients with lower levels of education (≤12 years of formal schooling). Conclusion: The ACE-R must be used cautiously as a screening tool for PD-MCI, with results being most influenced by its fluency sub-domain score and patient education levels. Copyright © 2011 S. Karger AG, Basel

---

Title: Is Apathy a Valid and Meaningful Symptom or Syndrome in Parkinson's Disease? A Critical Review.

Citation: Health Psychology, 01 July 2011, vol./is. 30/4(386-400), 02786133
Author(s): Bogart, Kathleen Rives

Abstract: Objective: To review the nearly 30 papers suggesting that apathy may occur frequently in Parkinson's disease (PD) and that it may be a symptom or syndrome that is separate from depression. Method: Literature review. Results: The review revealed three possible explanations for the high rates of apathy found in PD. First, there is much interest in an endogenous explanation of apathy because the basal ganglia and dopamine are implicated in both PD and apathy. Researchers have suggested links between apathy, dopamine depletion, and basal ganglia dysfunction in PD. Second, apathy in PD may be exogenous, resulting from disability and activity restriction. Third, apathy findings are inflated due to conceptual problems and methodological confounds. Indeed, apathy may be consistently confounded with symptoms of PD, including expressive masking, depression, disability, and cognitive decline. Conclusion: Because apathy has not yet been found to relate to meaningful patient outcomes, and it appears that other factors such as depression and cognition are more strongly related to quality of life than apathy, there is not enough evidence to conclude that apathy is a clinically meaningful syndrome in PD. The role of PD in motivation is of theoretical and practical interest and deserves further research.

Title: Depression and anxiety related subtypes in Parkinson's disease.

Citation: Journal of Neurology, Neurosurgery & Psychiatry, 01 July 2011, vol./is. 82/7(803-809), 00223050
Author(s): Brown RG, Landau S, Hindle JV, Playfer J, Samuel M, Wilson KC, Hurt CS, Anderson RJ, Carnell J, Dickinson L, Gibson G, van Schaick R, Sellwood K, Thomas BA, Burn DJ

Full Text:
Available in *fulltext* at Highwire Press

Title: Meta-analysis of the relationship between Parkinson disease and melanoma.

Citation: Neurology, 07 June 2011, vol./is. 76/23(2002-2009), 00283878
Author(s): Liu R, Gao X, Lu Y, Chen H

Abstract: OBJECTIVE: To assess the epidemiologic evidence on melanoma in relation to Parkinson disease (PD) via systematic review and meta-analysis. METHODS: Epidemiologic studies on melanoma and PD were searched using PubMed, Web of Science, Scoups, and Embase (1965 through June 2010). Eligible studies were those that reported risk estimates of melanoma among patients with PD or vice versa. Pooled odds ratios (ORs) with 95% confidence intervals (CIs) were calculated using random-effects models. RESULTS: We identified 12 eligible publications on melanoma and PD: 8 had fewer than 10 cases with both PD and melanoma, and 7 provided gender-specific results. The pooled OR was 2.11 (95% CI 1.26-3.54) overall, 2.04 (1.55-2.69) for men, and 1.52 (0.85-2.75) for women. Analyses by temporal relationship found that melanoma occurrence was significantly higher after the diagnosis of PD (OR 3.61, 95% CI 1.49-8.77), but not before PD diagnosis (OR 1.07, 95% CI 0.62-1.84). Further analyses revealed that the lack of significance in the latter analysis was due to one study, which when excluded resulted in a significant association (OR 1.44, 95% CI 1.06-1.96). We also analyzed nonmelanoma skin cancers in relation to PD and found no significant relationship (OR 1.11, 95% CI 0.94-1.30). CONCLUSIONS: Collective epidemiologic evidence supports an association of PD with melanoma. Further research is needed to examine the nature and mechanisms of this relationship.

Full Text:
Available in *fulltext* at Ovid

Title: Therapies for dopaminergic-induced dyskinesias in parkinson disease.

Citation: Annals of Neurology, 01 June 2011, vol./is. 69/6(919-927), 03645134
Author(s): Gottwald MD, Aminoff MJ

Abstract: Existing and emerging strategies for managing L-dopa-induced dyskinesias (LIDs) in patients with Parkinson disease have involved either delaying the introduction of L-dopa therapy, treatment with an antidyskinetic agent, using a therapy or delivery system that can provide continuous dopaminergic stimulation, or using novel agents that target receptors implicated in the mechanisms underlying LIDs. Treatment with dopamine agonists such as pramipexole or ropinirole allows levodopa to be delayed, but once levodopa is added to the drug regimen the usual course of onset of dyskinesias is observed. Amantadine, an N-methyl-D-aspartate antagonist, is so far the only approved compound with evidence of providing a sustained antidyskinetic benefit in the absence of unacceptable side effects. These findings support the hypothesis of glutamate overactivity in the development of dyskinesias. More continuous delivery of dopaminergic medication, such as through intraintestinal or subcutaneous routes, is promising but invasive and associated with injection site reactions. As a result of molecular research and elucidation of the role of a variety of neurotransmitters in the mechanism of LIDs, new compounds have been identified, including those that modulate the direct and indirect striatal output pathways; some of these new agents are in the early stages of development or undergoing proof-of-concept evaluation as antidyskinetic agents. Ann Neurol 2011;69:919-927.

Title: Aquatic Therapy Versus Conventional Land-Based Therapy for Parkinson's Disease: An Open-Label Pilot Study.

Citation: Archives of Physical Medicine & Rehabilitation, 01 August 2011, vol./is. 92/8(1202-1210), 00039993
Author(s): Vivas, Jamile, Arias, Pablo, Cudeiro, Javier

Abstract: Abstract: Vivas J, Arias P, Cudeiro J. Aquatic therapy versus conventional land-based therapy for Parkinson''s disease: an open-label pilot study. Objectives: To assess and compare 2 different protocols of physiotherapy (land or water therapy) for people with Parkinson''s disease (PD) focused on postural stability and self-movement, and to provide methodological information regarding progression within the program for a future larger trial. Design: Randomized, controlled, open-label pilot trial. Setting: Outpatients, Parkinson''s disease Center of Ferrol - Galicia (Spain). Participants: Individuals (N=11) with idiopathic PD in stages 2 or 3 according to the Hoehn and Yahr Scale completed the investigation (intervention period plus follow-up). Interventions: After baseline evaluations, participants were randomly assigned to a land-based therapy (active control group) or a water-based therapy (experimental group). Participants underwent individual sessions for 4 weeks, twice a week, for 45 minutes per session. Both interventions were matched in terms of exercise features, which were structured in stages with clear objectives and progression criteria to pass to the next phase. Main Outcome Measures: Participants underwent a first baseline assessment, a posttest immediately after 4 weeks of intervention, and a follow-up assessment after 17 days. Evaluations were performed OFF-dose after withholding medication for 12 hours. Functional assessments included the Functional Reach Test (FRT), the Berg Balance Scale (BBS), the UPDRS, the 5-m walk test, and the Timed Up and Go test. Results: A main effect of both therapies was seen for the FRT. Only the aquatic therapy group improved in the BBS and the UPDRS. Conclusions: In this pilot study, physiotherapy protocols produced improvement in postural stability in PD that was significantly larger after aquatic therapy. The intervention protocols are shown to be feasible and seem to be of value in amelioration of postural stability–related impairments in PD. Some of the methodological aspects detailed here can be used to design larger controlled trials.

Full Text:
Available in *print* at RNHRD Academy Library

Title: **Freezing of Gait in Parkinson Disease Is Associated With Impaired Conflict Resolution.**

Citation: Neurorehabilitation & Neural Repair, 01 October 2011, vol./is. 25/8(765-773), 15459683
Author(s): Vandenbossche, Jochen, Deroost, Natacha, Soetens, Eric, Spildooren, Joke, Vercruysse, Sarah, Nieuwboer, Alice, Kerckhofs, Eric

---

Title: A Prospective Study of Bowel Movement Frequency and Risk of Parkinson's Disease.

Citation: American Journal of Epidemiology, 01 September 2011, vol./is. 174/5(546-551), 00029262
Author(s): Gao, Xiang, Chen, Honglei, Schwarzschild, Michael A., Ascherio, Alberto

---

Title: Prevalence of malnutrition in Parkinson's disease: a systematic review.

Citation: Nutrition Reviews, 01 September 2011, vol./is. 69/9(520-532), 00296643
Author(s): Sheard, Jamie M, Ash, Susan, Silburn, Peter A, Kerr, Graham K

Title: Does vigorous exercise have a neuroprotective effect in Parkinson disease?

Citation: Neurology, 19 July 2011, vol./is. 77/3(288-294), 00283878
Author(s): Ahlskog JE

Abstract: Parkinson disease (PD) is progressive, with dementia and medication-refractory motor problems common reasons for late-stage nursing-home placement. Increasing evidence suggests that ongoing vigorous exercise/physical fitness may favorably influence this progression. Parkinsonian animal models reveal exercise-related protection from dopaminergic neurotoxins, apparently mediated by brain neurotrophic factors and neuroplasticity (predicted from in vitro studies). Similarly, exercise consistently improves cognition in animals, also linked to enhanced neuroplasticity and increased neurotrophic factor expression. In these animal models, immobilization has the opposite effect. Brain-derived neurotrophic factor (BDNF) may mediate at least some of this exercise benefit. In humans, exercise increases serum BDNF, and this is known to cross the blood-brain barrier. PD risk in humans is significantly reduced by midlife exercise, documented in large prospective studies. No studies have addressed whether exercise influences dementia risk in PD, but exercised patients with PD improve cognitive scores. Among seniors in general, exercise or physical fitness has not only been associated with better cognitive scores, but midlife exercise significantly reduces the later risk of both dementia and mild cognitive impairment. Finally, numerous studies in seniors with and without dementia have reported increased cerebral gray matter volumes associated with physical fitness or exercise. These findings have several implications for PD clinicians. 1) Ongoing vigorous exercise and physical fitness should be highly encouraged. 2) PD physical therapy programs should include structured, graduated fitness instruction and guidance for deconditioned patients with PD. 3) Levodopa and other forms of dopamine replenishment therapy should be utilized to achieve the maximum capability and motivation for patients to maintain fitness.

Full Text:
Available in *fulltext* at Ovid

Title: Open-label surgical trials for Parkinson disease: Time for reconsideration.

Citation: Annals of Neurology, 01 July 2011, vol./is. 70/1(5-8), 03645134
Author(s): Alterman RL, Tagliati M, Olanow CW

Title: Quantitative EEG as a predictive biomarker for Parkinson disease dementia.

Citation: Neurology, 12 July 2011, vol./is. 77/2(118-124), 00283878
Author(s): Klassen BT, Hentz JG, Shill HA, Driver-Dunckley E, Evidente VG, Sabbagh MN, Adler CH, Caviness JN

Abstract: OBJECTIVE: We evaluated quantitative EEG (QEEG) measures as predictive biomarkers for the development of dementia in Parkinson disease (PD). Preliminary work shows that QEEG measures correlate with current PD cognitive state. A reliable predictive QEEG biomarker for PD dementia (PD-D) incidence would be valuable for studying PD-D, including treatment trials aimed at preventing cognitive decline in PD. METHODS: A cohort of subjects with PD in our brain donation program utilizes annual premortem longitudinal movement and cognitive evaluation. These subjects also undergo biennial EEG recording. EEG from subjects with PD without dementia with follow-up cognitive evaluation was analyzed for QEEG measures of background rhythm frequency and relative power in [delta], , [alpha], and [beta] bands. The relationship between the time to onset of dementia and QEEG and other possible predictors was assessed by using Cox regression. RESULTS: The hazard of developing dementia was 13 times higher for those with low background rhythm frequency (lower than the grand median of 8.5 Hz) than for those with high background rhythm frequency (p < 0.001). Hazard ratios (HRs) were also significant for > median bandpower (HR = 3.0; p = 0.004) compared to below, and for certain neuropsychological measures. The HRs for [delta], [alpha], and [beta] bandpower as well as baseline demographic and clinical characteristics were not significant. CONCLUSION: The QEEG measures of background rhythm frequency and relative power in the band are potential predictive biomarkers for dementia incidence in PD. These QEEG biomarkers may be useful in complementing neuropsychological testing for studying PD-D incidence.

Full Text:
Available in *fulltext* at Ovid

Title: Survey of speech and language therapy provision for people with Parkinson's disease in the United Kingdom: patients' and carers' perspectives.

Citation: International Journal of Language & Communication Disorders, 01 March 2011, vol./is. 46/2(179-188), 13682822
Author(s): Miller, Nick, Noble, Emma, Jones, Diana, Deane, Katherine H. O., Gibb, Catherine

Abstract: Background: Communication and swallowing changes are prominent in Parkinson's disease, but there remains a lack of information regarding the experiences and expectations of people with Parkinson's disease in respect of speech-language therapy (SLT) services. Aims: To conduct a survey of people with Parkinson's disease and their carers in the United Kingdom to elicit their views concerning communication and swallowing changes in Parkinson's disease and the support they envisage in helping with these changes. Methods & Procedures: A national survey utilizing a questionnaire developed for the project, accessible by people with Parkinson's disease in web-based, e-mail or paper forms. Outcomes & Results: A total of 168 people with Parkinson's disease (median = 7 years since diagnosis, range = 0.5-30) and 47 carers who provided their impression of the experience of the PwPD responded. Of these 215, 92 (43%) had no contact with SLT services. In general those who had seen an SLT found it a positive experience. Pointers for improvement centred around timing, intensity, duration and access to SLT as well as issues around transfer and maintenance of gains outside of clinic and (lack of) attention to psychosocial dimensions. Availability of ongoing support as the situation evolved and access to SLT when it was needed were two prominent features desired of a responsive service. Conclusions & Implications: Responses suggest that when SLT is available it offers positive support, but respondents felt (re)access when and where SLT is needed could improve, as well as what aspects of swallowing and communication were addressed in assessment and therapy. We reflect on possible recommendations to address the challenges for SLT services in considering organization and content of provision.

Recent References from Medline (the premier healthcare worldwide database)

Title: The prevalence of symptomatic orthostatic hypotension in patients with Parkinson's disease and atypical parkinsonism.

Citation: Parkinsonism & Related Disorders, September 2011, vol./is. 17/8(625-8), 1353-8020;1873-5126 (2011 Sep)
Author(s): Ha AD, Brown CH, York MK, Jankovic J

Abstract: Non-motor symptoms in Parkinson disease (PD) have been increasingly recognized as a major cause of declining health-related quality of life. We aimed to determine the prevalence of symptomatic orthostatic hypotension (OH) in patients with PD and atypical parkinsonism, and to evaluate the risk factors for OH in this population. We reviewed the records of 1318 patients diagnosed with PD or atypical parkinsonism at the Parkinson's Disease Center and Movement Disorders Clinic, Baylor College of Medicine. The frequency of symptomatic OH was 81% (21/26) in patients with multiple system atrophy (MSA), 18% (198/1125) of PD patients, and 19% (31/167) of patients with non-MSA atypical parkinsonism. Among PD patients, those with symptoms of OH were significantly older (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.001), had more advanced Hoehn & Yahr stage (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.007), a longer duration of PD symptoms (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.031), and a greater range between their highest and lowest sitting systolic and diastolic BPs (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.0001) over time. In the atypical parkinsonism group, excluding MSA, patients with symptoms of OH were taking more anti-hypertensive medications than those without symptoms of OH (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.043). On the other hand, MSA patients with symptoms of OH were less likely to be taking anti-hypertensive medications than those without symptoms (p[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.035). In conclusion, symptomatic OH is a common cause of disability in patients with PD, atypical parkinsonian disorders, and especially in patients with MSA. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: Dementia associated with Parkinson's disease: applying the Movement Disorder Society Task Force criteria.

Citation: Parkinsonism & Related Disorders, September 2011, vol./is. 17/8(621-4), 1353-8020;1873-5126 (2011 Sep)
Author(s): Martinez-Martin P, Falup-Pecurariu C, Rodriguez-Blazquez C, Serrano-Duenas M, Carod Artal FJ, Rojo Abuin JM, Aarsland D

Abstract: BACKGROUND: Diagnostic criteria and procedures for dementia in Parkinson's disease (PDD) have been proposed by a Movement Disorders Society Task Force (MDS-TF). The objective of this study was to explore the utility of the new MDS-TF criteria and procedures in clinical practice.METHODS: Two hundred ninety nine PD patients (36.5% with PDD as per MDFS-TF criteria; 33.1% according the DSM-IV) were included in the study. A variety of standardized motor, cognitive, psychiatric, and global severity measures were administered. A multivariate logistic regression model was built to determine the variables producing discrepancy between the MDS-TF and DSM-IV criteria for PDD and the clinical features that distinguished false negative cases.RESULTS: Agreement between MDS-TF and DSM-IV criteria was substantial (87.3%; kappa[NON-BREAKING SPACE]=[NON-BREAKING SPACE]0.72), but the DSM-IV criteria failed to identify 22% of patients fulfilling MDS-TF criteria. False negative cases were older and had more severe motor symptoms but less psychosis than those true non-demented PD. False positives had less severe motor symptoms than true PDD, although the difference did not reach statistical significance.CONCLUSIONS: Our findings suggest that the MDS-TF criteria are more sensitive than the DSM-IV for a diagnosis of PDD. Old age, absence of psychiatric symptoms, and severe motor impairment can hinder the diagnosis of PDD. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: Falls in Parkinson's disease: evidence for altered stepping strategies on compliant surfaces.

Citation: Parkinsonism & Related Disorders, September 2011, vol./is. 17/8(610-6), 1353-8020;1873-5126 (2011 Sep)
Author(s): Cole MH, Silburn PA, Wood JM, Kerr GK

Abstract: BACKGROUND: Real-world environments comprise surfaces of different textures, densities and gradients, which can threaten postural stability and increase falls risk. However, there has been limited research that has examined how walking on compliant surfaces influences gait and postural stability in older people and PD patients.METHODS: PD patients (n[NON-BREAKING SPACE]=[NON-BREAKING SPACE]49) and age-matched controls (n[NON-BREAKING SPACE]=[NON-BREAKING SPACE]32) were assessed using three-dimensional motion analysis during self-paced walking on both firm and foam walkways. Falls were recorded prospectively over 12 months using daily falls calendars.RESULTS: Walking on a foam surface influenced the temporospatial characteristics for all groups, but PD fallers adopted very different joint kinematics compared with controls. PD fallers also demonstrated reduced toe clearance and had increased mediolateral head motion (relative to walking velocity) compared with control participants.CONCLUSIONS: Postural control deficits in PD fallers may impair their capacity to attenuate surface-related perturbations and control head motion. The risk of falling for PD patients may be increased on less stable surfaces. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: Mild cognitive impairment and cognitive reserve in Parkinson's disease.

Citation: Parkinsonism & Related Disorders, September 2011, vol./is. 17/8(579-86), 1353-8020;1873-5126 (2011 Sep)
Author(s): Poletti M, Emre M, Bonuccelli U

Abstract: Patients with Parkinson's disease (PD) typically present with motor symptoms, but non-motor symptoms, including cognitive impairment, autonomic dysfunction and neuropsychiatric symptoms, are usually also present, when looked for carefully. The objective of this paper is to provide an up-to-date, comprehensive review of two undecided issues about cognitive impairment in PD patients without dementia: the concept of Mild Cognitive Impairment (MCI) and the concept of Cognitive Reserve (CR). Empirical findings support the value of the concept of MCI in this population, from the early untreated stages onwards. Further studies are needed to establish 1) the clinical-neuroimaging characteristics of MCI subtypes in PD, in comparison to those MCI subtypes in patients without PD; 2) whether different types of MCI in PD are associated with different rates of cognitive decline during the progression of the disease. Preliminary empirical evidence also shows that education might exert a protective effect on cognitive decline in PD and that less educated subjects are at increased risk for developing dementia, lending support to the CR hypothesis, in this population as well. Further studies are necessary to investigate how CR modulates cognitive decline in PD and other frontal-subcortical disorders, e.g. by identifying possible differential effects of CR on different cognitive domains. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: Neurotrophic factors for the treatment of Parkinson's disease.

Citation: Cytokine & Growth Factor Reviews, June 2011, vol./is. 22/3(157-65), 1359-6101;1879-0305 (2011 Jun)
Author(s): Sullivan AM, Toulouse A

Abstract: Parkinson's disease (PD) is a common neurodegenerative disorder caused by the progressive degeneration of the nigrostriatal dopaminergic pathway. The resulting loss of dopamine neurotransmission is responsible for the symptoms of the disease. Available treatments are initially successful in treating PD symptoms; however, their long-term use is associated with complications and they cannot stop the neurodegeneration. Current research aims at developing new therapies to halt/reverse the neurodegenerative process, rather than treating symptoms. Neurotrophic factors are proteins critical for maintenance and protection of neurones in the developing and adult brain. Several neurotrophic factors have been investigated for their protective effects on dopaminergic neurones. Here we review some of the most promising factors and provide an update on their status in clinical trials. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: How might physical activity benefit patients with Parkinson disease?.

Citation: Nature Reviews Neuroscience, September 2011, vol./is. 7/9(528-34), 1759-4758;1759-4766 (2011 Sep)

Author(s): Speelman AD, van de Warrenburg BP, van Nimwegen M, Petzinger GM, Munneke M, Bloem BR

Abstract: Parkinson disease (PD) is a neurodegenerative disorder characterized by progressive motor and nonmotor impairments. These impairments incline many patients towards a sedentary lifestyle, which has many deleterious consequences. Accumulating evidence suggests that patients with PD might benefit from physical activity and exercise in a number of ways, from general improvements in health to disease-specific effects and, potentially, disease-modifying effects (suggested by animal data). Many issues remain to be addressed, including the need to perform clinical trials to demonstrate these presumed benefits of physical activity and exercise in patients with PD. These trials must also address safety issues, such as an increased risk of falls and cardiovascular complications in more-active patients. Identifying ways to induce a sustained behavioral change, using specifically tailored programs that address potential barriers such as depression, apathy and postural instability, may lead to an improved quality of life in individuals with PD.

Title: Understanding facial emotion perception in Parkinson's disease: The role of configural processing.

Citation: Neuropsychologia, October 2011, vol./is. 49/12(3295-302), 0028-3932;1873-3514 (2011 Oct)
Author(s): Narme P, Bonnet AM, Dubois B, Chaby L

Abstract: Parkinson's disease (PD) has been frequently associated with facial emotion recognition impairments, which could adversely affect the social functioning of those patients. Facial emotion recognition requires processing of the spatial relations between facial features, known as the facial configuration. Few studies, however, have investigated this ability in people with PD. We hypothesized that facial emotion recognition impairments in patients with PD could be accounted for by a deficit in configural processing. To assess this hypothesis, three tasks were proposed to 10 patients with PD and 10 healthy controls (HC): (i) a facial emotion recognition task with upright faces, (ii) a similar task with upside-down faces, to explore the face inversion effect, and (iii) a configural task to assess participants' abilities to detect configural modifications made on a horizontal or vertical axis. The results showed that when compared with the HC group, the PD group had impaired facial emotion recognition, in particular for faces expressing anger and fear, and exhibited reduced face inversion effect for these emotions. More importantly, the PD group's performance on the configural task to detect vertical modifications was lower than the HC group's. Taken together, these results suggest the presence of a configural processing alteration in patients with PD, especially for vertical, second-order information. Furthermore, configural performance was positively correlated with emotion recognition for anger, disgust, and fear, suggesting that facial emotion recognition could be related, at least partially, to configural processing. Copyright Copyright 2011 Elsevier Ltd. All rights reserved.

Title: Use of sensitive devices to assess the effect of medication on attentional demands of precision and power grips in individuals with Parkinson disease.

Citation: Medical & Biological Engineering & Computing, October 2011, vol./is. 49/10(1195-9), 0140-0118;1741-0444 (2011 Oct)
Author(s): Pradhan SD, Scherer R, Matsuoka Y, Kelly VE

Abstract: Deficits in fine motor control are a common early symptom in people with Parkinson disease (PD) and may serve as an ideal marker for the response to therapeutic interventions and progression of the disease. The long-term goal of this research is to develop sensitive clinical markers that can be used to accurately assess disease progression and the response to therapeutic interventions. The purpose of this preliminary study was to examine the effects of medication on the attentional demands of precision (Pre) and power (Pow) grips in individuals with PD. In order to assess force control during precision and power grip, we used an instrumented twist-cap device. Performance on the motor task was quantified using peak force levels (PF) and the time to reach peak force (TTP). To assess attentional demands of the motor task, participants performed an auditory analog of the Stroop test while performing the motor task. Dual-task cost (DTC) for all outcome variables was calculated. Dual-task cost for response latency (RL DTC) for both grips were greater (P[NON-BREAKING SPACE]<[NON-BREAKING SPACE]0.005) when participants were on medications('ONMeds'). Mean [95%CI]: Pre[NON-BREAKING SPACE]=[NON-BREAKING SPACE]25.7[14.7-36.7], Pow[NON-BREAKING SPACE]=[NON-BREAKING SPACE]37.08[26.5-47.7]) compared with off medications('OFFMeds') (Pre[NON-BREAKING SPACE]=[NON-BREAKING SPACE]12.6[1.5-23.6], Pow[NON-BREAKING SPACE]=[NON-BREAKING SPACE]10.98[0.4-21.6]), suggesting that force control during both grip tasks may remain attentionally demanding even on medications.

Sources Used

The following databases are searched on a regular basis in the development of this bulletin:

Amed
British Nursing Index
Cinahl
Medline

Disclaimer

The results of your literature search are based on the request that you made, and consist of a list of references, some with abstracts. Royal United Hospital Bath Healthcare Library will endeavour to use the best, most appropriate and most recent sources available to it, but accepts no liability for the information retrieved, which is subject to the content and accuracy of databases, and the limitations of the search process. The library assumes no liability for the interpretation or application of these results, which are not intended to provide advice or recommendations on patient care.