

Parkinson's Disease Current Awareness Bulletin

December 2017

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Title: Core elements to understand and improve coping with Parkinson's disease in patients and family carers: A focus group study

Citation: Journal of Advanced Nursing; Nov 2017; vol. 73 (no. 11); p. 2609

Author(s): Navarta-Sanchez, M Victoria; Caparros, Neus; Riverol Fernandez, Mario; Diaz De Cerio Ayesa, Sara; Ursua Sesma, M Eugenia; Portillo, Mari Carmen

Aims: The aim of this study were: (1) To explore the meaning that coping with Parkinson's disease has for patients and family carers; (2) To suggest the components of an intervention focused on enhancing their coping with the disease.

Background: Adapting to Parkinson's disease involves going through many difficult changes; however, it may improve quality of life in patients and family carers. One of the key aspects for facilitating the psychosocial adjustment to Parkinson's disease is the strengthening of coping skills.

Design: A sequential explanatory mixed methods study was carried out. Findings from the qualitative phase are presented.

Methods: Data were collected in May 2014 through three focus groups: one of people with Parkinson's disease (n = 9), one of family carers (n = 7) and one of healthcare professionals (n = 5). All focus groups were digitally recorded and transcribed verbatim and content analysis was independently carried out by two researchers.

Findings: The participants coincided in highlighting that coping with Parkinson's disease helped the patient and the family carer in their search for balance; and it implied a transformation in their lives. To aid the process of coping with Parkinson's disease, a multifaceted intervention is proposed.

Conclusion: Coping with Parkinson's disease is a complex process for both patients and family carers and it should therefore be considered a standard service in healthcare policies aimed at this group. The proposed intervention constitutes a nursing tool which has great potential to improve the quality of life in Parkinson's disease and in other long-term conditions.

Title: ParkinsonNet: A Low-Cost Health Care Innovation With A Systems Approach From The Netherlands.

Citation: Health Affairs; Nov 2017; vol. 36 (no. 11); p. 1987-1996

Author(s): Bloem, Bas R.; Rompen, Lonneke; de Vries, Nienke M.; Klink, Ab; Munneke, Marten; Jeurissen, Patrick

Abstract: ParkinsonNet, a low-cost innovation to optimize care for patients with Parkinson disease, was developed in 2004 as a network of physical therapists in several regions in the Netherlands. Since that time, the network has achieved full national reach, with 70 regional networks and around 3,000 specifically trained professionals from 12 disciplines. Key elements include the empowerment of professionals who are highly trained and specialized in Parkinson disease, the empowerment of patients by education and consultation, and the empowerment of integrated multidisciplinary teams to better address and manage the disease. Studies have found that the ParkinsonNet approach leads to outcomes that are at least as good as, if not better than, outcomes from usual care. One study found a 50 percent reduction in hip fractures and fewer inpatient admissions. Other studies suggest that ParkinsonNet leads to modest but important cost savings (at least US\$439 per patient annually). These cost savings outweigh the costs of building and maintaining the network.

Because of ParkinsonNet's success, the program has now spread to several other countries and serves as a model of a successful and scalable frugal innovation.

Title: Can lifestyle modification slow progression of Parkinson disease?

Source: Neurology; Oct 2017; vol. 89 (no. 17); p. 1760-1761

Author(s): Hedera, Peter; Davis, Thomas L.

Abstract: Parkinson disease (PD), similar to other neurodegenerative conditions, is characterized by relentless clinical progression with gradual worsening of both motor and nonmotor features. Potential neuroprotective therapies focusing on aspects of neurodegeneration in PD such as impaired mitochondrial function with abnormalities of oxidative phosphorylation, increased oxidative stress, and suppressed neuroinflammation, have failed to alter the clinical course of PD. New insights into PD pathophysiology have identified potential molecular targets, including accumulation and potential prion-like spreading of aggregates containing misfolded α -synuclein protein. These therapies are only approaching clinical testing, and their true therapeutic potential remains unknown. Even if successful, they are many years away from clinical availability. Thus, at present, we do not have any proven pharmacologic options to modify the progressive decline of patients with PD.

Title: Virtually reducing fall risk in Parkinson disease.

Citation: Neurology; Oct 2017; vol. 89 (no. 17); p. 1762-1763

Author(s): Moreau, Caroline; Barton, Brandon R.; Devos, David

Abstract: Falls are common and often represent devastating events for patients with advanced Parkinson disease (PD). Prospective studies report that 70% of people with PD have at least one fall in a year, and that 39% fall recurrently. Falls have serious consequences (fractures and other injury, hospital admission, fear of falls, and an increase in caregiver burden).^{1,2} The few available treatment options are not highly effective.

Title: Pharmacological management of patients with Parkinson's disease in the acute hospital setting: a review.

Citation: British Journal of Neuroscience Nursing; Oct 2017; vol. 13 (no. 5); p. 220-224

Author(s): Donizak, Joanna; McCabe, Catherine

Abstract: Parkinson's disease (PD) is a progressive neurodegenerative disorder that requires a complex and patient-specific medication regimen for optimal symptom control. Hospitalisation of patients with PD involves many challenges due to lack of knowledge in PD management among hospital staff. This article presents findings of a literature review on the subject of medication management of patients with PD in the acute hospital setting. Research revealed a deficit in PD-specific expertise among hospital staff that acts as a barrier in optimal medication management. The evidence suggests that the pharmacological management of hospitalised patients with PD is far from ideal, with a high prevalence of untimely administration of PD drugs and a repeated use of medications contraindicated in PD which are likely to result in consequent poor outcome for PD patients. Education programmes to improve awareness among nurses is essential.

Title: Using the updated Parkinson's NICE guidelines.

Citation: British Journal of Neuroscience Nursing; Oct 2017; vol. 13 (no. 5); p. 228-231

Author(s): Cockram, Laura

Abstract: In July 2017, the National Institute for Health and Care Excellence published its updated guidelines on care and treatment for people with Parkinson's disease. It has been over 10 years since the guidelines were updated and there are some welcome changes which, if implemented, could improve the care people with Parkinson's and their families receive. This article outlines the changes in the updated guidelines, shares data from the UK Parkinson's audit that demonstrates the need for improved practice, and encourages nurses to get involved in the UK Parkinson's Excellence Network to raise the quality of care for people living with the condition.

Title: Evidence-Based Review of Pharmacotherapy Used for Parkinson's Disease Psychosis.

Citation: Annals of Pharmacotherapy; Aug 2017; vol. 51 (no. 8); p. 682-695

Author(s): Wilby, Kyle John; Johnson, Eric G.; Johnson, Hannah E.; Ensom, Mary H. H.

Objective: To summarize and evaluate the existing literature regarding medications to treat Parkinson's disease (PD) psychosis.

Data Sources: MEDLINE (1946 to March 2017), EMBASE (1980 to March 2017), CINAHL (1982 to March 2017), and PsychInfo (1887 to March 2017) were searched using the following terms: Parkinson disease, Parkinson's disease, psychotic disorders, psychosis, delusions, and hallucinations.

Study Selection and Data Extraction: The search was limited to randomized controlled trials (RCTs) reporting human outcomes. Data extracted included the following: study design, population, setting, intervention, control, outcomes related to psychosis and safety, and potential biases assessed using Cochrane Collaboration's Risk of Bias Assessment Tool.

Data Synthesis: After assessment, 16 of 235 studies were included; 11 articles reported comparisons between active drug and placebo, whereas 5 compared clozapine and an active comparator. Placebo-controlled trials demonstrated benefit for clozapine (n = 2) and pimavanserin (n = 2), with no firm benefits observed for quetiapine (n = 4) or olanzapine (n = 3). Comparative studies demonstrated improved efficacy in symptom scores when clozapine or comparator agent (n = 2, quetiapine; n = 1, olanzapine; n = 1, risperidone; and n = 1, ziprasidone) was assessed alone. However, no comparator data suggest that one agent is better than another, and none are yet available for pimavanserin. Overall risk of bias across all studies was moderate to high.

Conclusions: Despite lack of rigor in study designs, published data to date suggest that clozapine and pimavanserin should be considered drugs of choice to treat PD psychosis.

Title: A long-term self-managed handwriting intervention for people with Parkinson's disease: results from the control group of a phase II randomized controlled trial.

Citation: Clinical Rehabilitation; Dec 2017; vol. 31 (no. 12); p. 1636-1645

Author(s): Collett, Johnny; Franssen, Marloes; Winward, Charlotte; Izadi, Hooshang; Meaney, Andy; Mahmoud, Wala; Bogdanovic, Marko; Tims, Martin; Wade, Derick; Dawes, Helen

Objective: To report on the control group of a trial primarily designed to investigate exercise for improving mobility in people with Parkinson's disease (pwP). The control group undertook a handwriting intervention to control for attention and time spent practising a specific activity.

Design: Secondary analysis of a two-arm parallel phase II randomized controlled trial with blind assessment.

Setting: Community. Participants: PwP able to walk ≥ 100 m and with no contraindication to exercise were recruited from the Thames Valley, UK, and randomized (1:1) to exercise or handwriting, via a concealed computer-generated list. Intervention: Handwriting was undertaken at home and exercise in community facilities; both were delivered through workbooks with monthly support visits and involved practice for 1 hour, twice weekly, over a period of six months.

Main measures: Handwriting was assessed, at baseline, 3, 6 and 12 months, using a pangram giving writing speed, amplitude (area) and progressive reduction in amplitude (ratio). The Movement Disorder Society (MDS)–Unified Parkinson's Disease Rating Scale (UPDRS) item 2.7 measured self-reported handwriting deficits. Results: In all, 105 pwP were recruited (analysed: $n = 51$ handwriting, $n = 54$ exercise). A total of 40 pwP adhered to the handwriting programme, most completing ≥ 1 session/week. Moderate effects were found for amplitude (total area: $d = 0.32$; 95% confidence interval (CI): -0.11 to 0.7 ; $P = 0.13$) in favour of handwriting over a period of 12 months; effects for writing speed and ratio parameters were small ≤ 0.11 . Self-reported handwriting difficulties also favoured handwriting (UPDRS 2.7: odds ratio (OR) = 0.55 ; 95% CI: 0.34 to 0.91 ; $P = 0.02$). No adverse effects were reported.

Conclusion: PwP generally adhere to self-directed home handwriting which may provide benefit with minimal risk. Encouraging effects were found in writing amplitude and, moreover, perceived ability.

Title: Effects of a low-resistance, interval bicycling intervention in Parkinson's Disease.

Citation: Physiotherapy Theory & Practice; Dec 2017; vol. 33 (no. 12); p. 897-904

Author(s): Uygur, Mehmet; Bellumori, Maria; Knight, Christopher A

Abstract: Previous studies have shown that people with Parkinson's disease (PD) benefit from a variety of exercise modalities with respect to symptom management and function. Among the possible exercise modalities, speedwork has been identified as a promising strategy, with direct implications for the rate and amplitude of nervous system involvement. Considering that previous speed-based exercise for PD has often been equipment, personnel and/or facility dependent, and often time intensive, our purpose was to develop a population-specific exercise program that could be self-administered with equipment that is readily found in fitness centers or perhaps the home. Fourteen individuals with PD (Hoehn-Yahr (H-Y) stage of 3.0 or less) participated in twelve 30-min sessions of low-resistance interval training on a stationary recumbent bicycle. Motor examination section of the Unified Parkinson's Disease Rating Scale (UPDRS), 10-meter walk (10mW), timed-up-and-go (TUG), functional reach, four-square step test (4SST), nine-hole peg test (9HPT) and simple reaction time scores all exhibited significant improvements ($p < 0.05$). These results add

further support to the practice of speedwork for people with PD and outline a population-amenable program with high feasibility.

Title: The effects of exergaming and treadmill training on gait, balance, and cognition in a person with Parkinson's disease: A case study.

Citation: Physiotherapy Theory & Practice; Dec 2017; vol. 33 (no. 12); p. 920-931

Author(s): Vallabhajosula, Srikant; McMillion, Amy K.; Freund, Jane E.

Background: Parkinson's disease (PD) commonly impairs posture, gait, and cognition. Exercise in the form of aerobic activity as well as exergaming may improve motor ability and cognition in persons with PD. Exergaming and treadmill training can be a practical form of exercise within the home; however, there is minimal research on this combined multimodal intervention for persons with PD.

Objective: We investigated the effects of this combined intervention on cognition, balance, and gait in a person with PD through supervised lab sessions augmented by home-based sessions.

Methods: This case study utilized an ABA single subject experimental design with 4 weeks of pre-intervention, followed by 8 weeks of intervention, and 4 weeks of post-intervention. The intervention consisted of treadmill walking and Xbox Kinect exergaming, 30 minutes each, performed unsupervised at home and at supervised lab sessions. The two standard deviation band method was used to determine significance.

Results: MiniBEST test, 2-minute walk distance, sway area, endurance test, and a few parameters of gait initiation and gait improved significantly throughout the intervention period. Only a few measures sustained the improvement 4 weeks after completion of intervention.

Conclusion: Eight weeks of treadmill and exergaming intervention with a person with PD improved static and dynamic postural control measures, but not gait, cognition, endurance, and clinical measures of balance. Longer and more intense multimodal intervention may be warranted.

Title: Self-Reported Symptoms of Parkinson's Disease by Sex and Disease Duration.

Citation: Western Journal of Nursing Research; Nov 2017; vol. 39 (no. 11); p. 1412-1428

Author(s): Ju Young Shin; Pohlig, Ryan T.; Habermann, Barbara

Abstract: Parkinson's disease (PD) is a neurodegenerative disease with a wide range of symptom presentations. The purpose of this research was to compare self-reported motor and non-motor symptoms of PD by sex and disease duration. This study was a cross-sectional descriptive survey in communitydwelling people with PD. A total of 141 participants (64.6% response rate; 59.6% men; Mage = 69.7 years) were included. Males reported more rigidity, speech problems, sexual dysfunction, memory problems and socializing problems than females. The number of motor symptoms in three groups divided by increments of 5 years was significantly increased. Postural instability, freezing, off periods, dyskinesia, speech problems and hallucinations/psychosis were significantly increased as the disease duration increased. Thorough assessment of motor and non-motor symptoms could decrease the risk of inadequate symptom management. Provision of information regarding PD symptoms at each stage may help people with PD and their caregivers in planning their future care and life.

Title: Clinical outcomes of asleep vs awake deep brain stimulation for Parkinson disease.

Author(s): Brodsky, Matthew A; Anderson, Shannon; Murchison, Charles; Seier, Mara; Wilhelm, Jennifer; Vederman, Aaron; Burchiel, Kim J

Source: Neurology; Nov 2017; vol. 89 (no. 19); p. 1944-1950

Objective: To compare motor and nonmotor outcomes at 6 months of asleep deep brain stimulation (DBS) for Parkinson disease (PD) using intraoperative imaging guidance to confirm electrode placement vs awake DBS using microelectrode recording to confirm electrode placement.

Methods: DBS candidates with PD referred to Oregon Health & Science University underwent asleep DBS with imaging guidance. Six-month outcomes were compared to those of patients who previously underwent awake DBS by the same surgeon and center. Assessments included an "off"-levodopa Unified Parkinson's Disease Rating Scale (UPDRS) II and III, the 39-item Parkinson's Disease Questionnaire, motor diaries, and speech fluency.

Results: Thirty participants underwent asleep DBS and 39 underwent awake DBS. No difference was observed in improvement of UPDRS III ($+14.8 \pm 8.9$ vs $+17.6 \pm 12.3$ points, $p = 0.19$) or UPDRS II ($+9.3 \pm 2.7$ vs $+7.4 \pm 5.8$ points, $p = 0.16$). Improvement in "on" time without dyskinesia was superior in asleep DBS ($+6.4 \pm 3.0$ h/d vs $+1.7 \pm 1.2$ h/d, $p = 0.002$). Quality of life scores improved in both groups ($+18.8 \pm 9.4$ in awake, $+8.9 \pm 11.5$ in asleep). Improvement in summary index ($p = 0.004$) and subscores for cognition ($p = 0.011$) and communication ($p < 0.001$) were superior in asleep DBS. Speech outcomes were superior in asleep DBS, both in category ($+2.77 \pm 4.3$ points vs -6.31 ± 9.7 points ($p = 0.0012$) and phonemic fluency ($+1.0 \pm 8.2$ points vs -5.5 ± 9.6 points, $p = 0.038$).

Conclusions: Asleep DBS for PD improved motor outcomes over 6 months on par with or better than awake DBS, was superior with regard to speech fluency and quality of life, and should be an option considered for all patients who are candidates for this treatment.

Clinicaltrials.gov Identifier: NCT01703598.

Classification Of Evidence: This study provides Class III evidence that for patients with PD undergoing DBS, asleep intraoperative CT imaging-guided implantation is not significantly different from awake microelectrode recording-guided implantation in improving motor outcomes at 6 months.

Title: Longitudinal decline of driving safety in Parkinson disease.

Citation: Neurology; Nov 2017; vol. 89 (no. 19); p. 1951-1958

Author(s): Uc, Ergun Y; Rizzo, Matthew; O'Shea, Amy M J; Anderson, Steven W; Dawson, Jeffrey D

Objective: To longitudinally assess and predict on-road driving safety in Parkinson disease (PD).

Methods: Drivers with PD ($n = 67$) and healthy controls ($n = 110$) drove a standardized route in an instrumented vehicle and were invited to return 2 years later. A professional driving expert reviewed drive data and videos to score safety errors.

Results: At baseline, drivers with PD performed worse on visual, cognitive, and motor tests, and committed more road safety errors compared to controls (median PD 38.0 vs controls 30.5; $p < 0.001$). A smaller proportion of drivers with PD returned for repeat testing (42.8% vs 62.7%; $p < 0.01$). At baseline, returnees with PD made fewer errors than nonreturnees

with PD (median 34.5 vs 40.0; $p < 0.05$) and performed similar to control returnees (median 33). Baseline global cognitive performance of returnees with PD was better than that of nonreturnees with PD, but worse than for control returnees ($p < 0.05$). After 2 years, returnees with PD showed greater cognitive decline and larger increase in error counts than control returnees (median increase PD 13.5 vs controls 3.0; $p < 0.001$). Driving error count increase in the returnees with PD was predicted by greater error count and worse visual acuity at baseline, and by greater interval worsening of global cognition, Unified Parkinson's Disease Rating Scale activities of daily living score, executive functions, visual processing speed, and attention.

Conclusions: Despite drop out of the more impaired drivers within the PD cohort, returning drivers with PD, who drove like controls without PD at baseline, showed many more driving safety errors than controls after 2 years. Driving decline in PD was predicted by baseline driving performance and deterioration of cognitive, visual, and functional abnormalities on follow-up.

Title: Advanced Parkinson's or "complex phase" Parkinson's disease? Re-evaluation is needed.

Citation: Journal of neural transmission (Vienna, Austria : 1996); Nov 2017

Author(s): Titova, Nataliya; Martinez-Martin, Pablo; Katunina, Elena; Chaudhuri, K Ray

Abstract: Holistic management of Parkinson's disease, now recognised as a combined motor and nonmotor disorder, remains a key unmet need. Such management needs relatively accurate definition of the various stages of Parkinson's from early untreated to late palliative as each stage calls for personalised therapies. Management also needs to have a robust knowledge of the progression pattern and clinical heterogeneity of the presentation of Parkinson's which may manifest in a motor dominant or nonmotor dominant manner. The "advanced" stages of Parkinson's disease qualify for advanced treatments such as with continuous infusion or stereotactic surgery yet the concept of "advanced Parkinson's disease" (APD) remains controversial in spite of growing knowledge of the natural history of the motor syndrome of PD. Advanced PD is currently largely defined on the basis of consensus opinion and thus with several caveats. Nonmotor aspects of PD may also reflect advancing course of the disorder, so far not reflected in usual scale based assessments which are largely focussed on motor symptoms. In this paper, we discuss the problems with current definitions of "advanced" PD and also propose the term "complex phase" Parkinson's disease as an alternative which takes into account a multimodal symptoms and biomarker based approach in addition to patient preference.

Title: Factors that lead to hospitalisation in patients with Parkinson disease-A systematic review.

Citation: International journal of clinical practice; Nov 2017

Author(s): Koay, Luan; Rose, Joanne; Abdelhafiz, Ahmed H

Objectives: Parkinson disease (PD) frequently leads to acute hospitalisation resulting in increased cost to health care systems and reduced quality of life for patients. The objective of this review was to identify causes that lead to acute hospitalisation of patients with PD.

Methods: A systematic review of English language literature from 1997 to present.

Findings: The incidences of acute general medical or surgical problems that trigger acute hospitalisation in patients with PD are similar to those in the general population. However,

falls, acute decompensation of PD symptoms and infections are far more common in PD patients and are responsible for more than 50% of the causes of hospitalisation in this patients' group.

Implications: Preventive strategies to avoid decompensation of PD symptoms and early detection and treatment of infections are needed to reduce hospitalisation in patients with PD.

Title: The effects of yoga versus stretching and resistance training exercises on psychological distress for people with mild-to-moderate Parkinson's disease: study protocol for a randomized controlled trial.

Citation: Trials; Nov 2017; vol. 18 (no. 1); p. 509

Author(s): Kwok, JoJo Yan Yan; Kwan, Jackie Cheuk Yin; Auyeung, Man; Mok, Vincent Chung Tong; Chan, Helen Yue Lai

Background: Psychological distress is prevalent among people with Parkinson's disease (PD) and aggravates their motor symptoms, thereby leading to increased disability, high healthcare costs, and poor health-related quality of life (HRQoL). The under-recognition and adverse effects of the pharmacological management of anxiety and depression among the PD population are considerable. Thus, adopting a Complementary and Alternative Management (CAM) approach to address this problem is important. Yoga, one of the most common "mind-body" CAM therapies, can improve the psychological wellbeing of people with chronic illnesses. However, limited research on the effects of yoga in people with PD has been conducted. This study will determine the effects of yoga on the psychological wellbeing of people with mild-to-moderate PD and will compare these effects with those of stretching and resistance training exercises.

Methods: A community-based, single-blind, randomized trial will be conducted. A total of 126 subjects will be recruited and randomly divided into yoga (n = 63) or stretching and resistance exercise (n = 63) groups. For 8 weeks, the yoga group will receive a weekly 90-min session of yoga, and the control group will receive a weekly 60-min session of stretching and resistance exercises. The primary outcome will be the level of psychological distress measured using the Hospital Anxiety and Depression Scale. The secondary outcomes will include the severity of motor symptoms measured by the Movement Disorders Society - Unified Parkinson's Disease Scale - Part III Motor Examination; mobility, balance, and fall risk measured by the Timed Up and Go test; spiritual wellbeing measured by the Holistic Wellbeing Scale; and HRQoL measured by the Parkinson's Disease Questionnaire-8. Assessment will be conducted at baseline, 8th, and 20th weeks of follow-ups.

Discussion: This study will be the first randomized trial to compare the effect of yoga versus stretching and resistance training exercises in a PD population. Results will contribute to the value of yoga as a therapeutic option for managing psychological distress in PD patients. Multiple outcomes including psychological, physiological, and spiritual and HRQoL will also be measured to elucidate the potential mechanisms of yoga. The effect of yoga on people with chronic illnesses will further be elucidated. This information should contribute to future research, practice, and policy related to PD management.

Trial Registration: WHO Primary Registry - Chinese Clinical Trials Registry (ChiCTR): CUHK_CCRB00522 Registered on 8 October 2016; date of approval 19 August 2016.

Title: Apathy Profile in Parkinson's and Huntington's Disease: A Comparative Cross-Sectional Study.

Citation: European neurology; Nov 2017; vol. 79 (no. 1-2); p. 13-20

Author(s): Sousa, Mário; Moreira, Fradique; Jesus-Ribeiro, Joana; Marques, Inês; Cunha, Flávia; Canário, Nádia; Freire, António; Januário, Cristina

Background/Aims: Apathy is one of the most frequent, disabling and difficult-to-treat symptoms that show up in many neurodegenerative disorders. The aim of this study was to assess and compare apathy profile in Parkinson's and Huntington's patients using the same comprehensive instruments to measure apathy, cognition and depressive symptoms.

Materials and Methods: We consecutively assessed Parkinson's disease (PD) and Huntington's disease (HD) patients recruited from a Movement Disorders Unit. In all patients, information related to demographics, clinical data, motor score (Movement Disorders Society-Unified Parkinson Disease Rating Scale; Unified Huntington Disease Rating Scale), cognition (Montreal Cognitive Assessment scale), depressive symptoms (Beck Depression Inventory II) and apathy (Apathy Evaluation Scale - clinical version) was collected. Patients with dementia or major depression according to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revised criteria were excluded from the study.

Results: Seventy-five patients were enrolled, 45 with PD and 30 with HD. Apathy was present in 42.5% of PD patients and 51.7% of HD patients. In PD patients, apathy was associated with motor score, shorter duration of disease, lower dose of levodopa equivalent daily dose and depressive symptomatology, whereas in HD patients, apathy was related to disease duration, motor score and cognitive impairment.

Conclusions: We found a similar prevalence of apathy in PD and HD patients but with different clinical correlations and different apathy domains involved, and this may warrant the development of different therapeutic approaches.

Title: Parkinson's disease psychosis: presentation, diagnosis and management.

Citation: Neurodegenerative disease management; Nov 2017

Author(s): Schneider, Ruth B; Iourinets, Julia; Richard, Irene H

Abstract: Parkinson's disease is a neurodegenerative disorder characterized by motor and nonmotor symptoms. Psychosis is a common feature of Parkinson's disease. Parkinson's disease psychosis (PDP) encompasses minor phenomena (illusions, passage hallucinations and presence hallucinations), visual and nonvisual hallucinations and delusions. PDP is associated with reduced function and quality of life. The initial management approach should focus on identification and treatment of any contributory medical factors, reduction or discontinuation of medications with potential to induce or worsen psychosis, nonpharmacological strategies and consideration of acetylcholinesterase inhibitor treatment in the setting of dementia. Pimavanserin, quetiapine and clozapine may all be considered for use in PDP. In this review, we discuss the presentation, diagnosis and management of PDP.

Title: Early weight loss in parkinsonism predicts poor outcomes: Evidence from an incident cohort study.

Citation: Neurology; Nov 2017; vol. 89 (no. 22); p. 2254-2261

Author(s): Cumming, Kirsten; Macleod, Angus D; Myint, Phyo K; Counsell, Carl E

Objective: To compare weight change over time in patients with Parkinson disease (PD), those with atypical parkinsonism, and matched controls; to identify baseline factors that influence weight loss in parkinsonism; and to examine whether it predicts poor outcome.

Methods: We analyzed data from the Parkinsonism Incidence in North-East Scotland (PINE) study, an incident, population-based prospective cohort of parkinsonian patients and age- and sex-matched controls with annual follow-up. Mixed-model analysis described weight change in patients with PD, those with atypical parkinsonism, and controls. Baseline determinants of sustained clinically significant weight loss (>5% loss from baseline) and associations between early sustained weight loss and death, dementia, and dependency in parkinsonism were studied with Cox regression.

Results: A total of 515 participants (240 controls, 187 with PD, 88 with atypical parkinsonism) were followed up for a median of 5 years. At diagnosis, atypical parkinsonian patients had lower body weights than patients with PD, who were lighter than controls. Patients with PD lost weight more rapidly than controls, and weight loss was most rapid in atypical parkinsonism. After multivariable adjustment for potential confounders, only age was independently associated with sustained clinically significant weight loss (hazard ratio [HR] for 10-year age increase 1.83, 95% confidence interval [CI] 1.44-2.32). Weight loss occurring within 1 year of diagnosis was independently associated with increased risk of dependency (HR 2.11, 95% CI 1.00-4.42), dementia (HR 3.23, 95% CI 1.40-7.44), and death (HR 2.23, 95% CI 1.46-3.41).

Conclusion: Weight loss occurs in early parkinsonism and is greater in atypical parkinsonism than in PD. Early weight loss in parkinsonism has prognostic significance, and targeted dietary interventions to prevent it may improve long-term outcomes.

Title: Understanding the lived experiences of Parkinson's disease and deep brain stimulation (DBS) through occupational changes.

Citation: Australian occupational therapy journal; Nov 2017

Author(s): Liddle, Jacki; Phillips, Jessie; Gustafsson, Louise; Silburn, Peter

Background: Deep brain stimulation (DBS), a surgically based treatment for people living with Parkinson's disease (PD), can result in a significant improvement of motor symptoms. However, the broader impact of DBS and the changes it creates are not well understood. Greater understanding of the experiences and needs related to DBS would enable development of relevant outcome measures and supports.

Objectives: To explore the lived experiences of people undergoing DBS for Parkinson's disease.

Methods: A descriptive phenomenological study was undertaken exploring experiences, perspectives and outcomes with key stakeholders. Semi-structured, audiotaped interviews were undertaken with people with PD who have had DBS, their family members and health professionals across four states and territories in Australia.

Results: Perspectives and experiences of 14 people with PD undergoing DBS, 10 family members and 11 health professionals were analysed. Occupations emerged as a key aspect throughout the DBS experience. Two major themes captured the role of occupation in relation to DBS: Occupations as a barometer, where occupational experiences and performances shaped people's understanding of their condition, the impact of treatments and their overall adjustment; and Shifting occupational identity where the life transition of DBS altered the occupational experiences of relationships, volition, roles and responsibilities of people with PD and their family members.

Conclusion: Occupational experiences and changes served as an important way for people with PD and their families to understand and communicate their experiences of PD and related treatments. There is an identified need for outcome measures and clinical education and interventions to reflect this.

Title: Palliative care for patients with Parkinson's disease: study protocol for a mixed methods study.

Citation: BMC palliative care; Nov 2017; vol. 16 (no. 1); p. 61

Author(s): Lennaerts, Herma; Groot, Marieke; Steppe, Maxime; van der Steen, Jenny T; Van den Brand, Marieke; van Amelsvoort, Dorian; Vissers, Kris; Munneke, Marten; Bloem, Bastiaan R

Background: Parkinson's disease (PD) is a chronic, progressive neurological disorder with many intractable consequences for patients and their family caregivers. Little is known about the possibilities that palliative care could offer to patients and their proxies. Guidelines strongly recommend palliative care to improve the quality of life and - if needed - the quality of dying. However, providing palliative care to persons with PD involves specific challenges. For example, a timely initiation of palliative interventions is difficult because due to the gradually progressive nature of PD, there is often no clear marker for the transition from curative towards palliative care. Furthermore, there is little evidence to indicate which palliative care interventions are effective. Here, we describe the contours of a study that aims to examine the experiences of patients, (bereaved) family caregivers and professionals, with the aim of improving our knowledge about palliative care needs in PD.

Methods/Design: We will perform a mixed methods study to evaluate the experiences of patients, (bereaved) family caregivers and palliative care professionals. In this study, we focus on Quality of Life, Quality of Care, perceived symptoms, caregiver burden and collaboration between professionals. In phase 1, we will retrospectively explore the views of bereaved family caregivers and professionals by conducting individual interviews and focus group interviews. In phase 2, 5-15 patients with PD and their family caregiver will be followed prospectively for 8-12 months. Data collection will involve semi-structured interviews and questionnaires at three consecutive contact moments. Qualitative data will be audio recorded, transcribed and analyzed using CAQDAS. If patients pass away during the study period, a bereavement interview will be done with the closest family caregiver.

Discussion: This study will offer a broad perspective on palliative care, and the results can be used to inform a palliative care protocol for patients with PD. By describing the experiences of patients, (bereaved) family caregivers and professionals with palliative care, this investigation will also establish an important ground for future intervention research.

Title: Impact of sleep-related symptoms on clinical motor subtypes and disability in Parkinson's disease: a multicentre cross-sectional study.

Citation: Journal of neurology, neurosurgery, and psychiatry; Nov 2017; vol. 88 (no. 11); p. 953-959

Author(s): Suzuki, Keisuke; Okuma, Yasuyuki; Uchiyama, Tomoyuki; Miyamoto, Masayuki; Sakakibara, Ryuji; Shimo, Yasushi; Hattori, Nobutaka; Kuwabara, Satoshi; Yamamoto, Toshimasa; Kaji, Yoshiaki; Hirano, Shigeki; Kadowaki, Taro; Hirata, Koichi; Kanto NMPD investigators

Objectives: To investigate the impact of sleep disturbances on Parkinson's disease (PD) clinical motor subtypes and disease-related disability in a multicentre setting.

Methods: We report a cross-sectional relationship between sleep-related symptoms and clinical motor subtypes (tremor dominant (TD); intermediate; postural instability and gait disturbances (PIGDs)) identified in a multicentre study, including 436 patients with PD and

401 age-matched controls. PD-related sleep problems (PD-SP), excessive daytime sleepiness (EDS) and probable REM sleep behaviour disorder (pRBD) were evaluated using the PD sleep scale (PDSS)-2, Epworth Sleepiness Scale (ESS) and RBD screening questionnaire-Japanese version (RBDSQ-J), respectively.

Results: PD-SP (PDSS-2 ≥ 18 ; 35.1% vs 7.0%), EDS (ESS ≥ 10 ; 37.8% vs 15.5%) and pRBD (RBDSQ-J ≥ 5 ; 35.1% vs 7.7%) were more common in patients with PD than in controls. The prevalence of restless legs syndrome did not differ between patients with PD and controls (3.4% vs 2.7%). After adjusting for age, sex, disease duration and Movement Disorder Society-Unified PD Rating Scale (MDS-UPDRS) part III score, the PIGD group had higher PDSS-2 and ESS scores than the TD group. The RBDSQ-J scores did not differ among the TD, intermediate and PIGD groups. A stepwise regression model predicting the MDS-UPDRS part II score identified the Hoehn and Yahr stage, followed by the number of sleep-related symptoms (PD-SP, EDS and pRBD), disease duration, MDS-UPDRS part III score, PIGD subtype, depression and MDS-UPDRS part IV score as significant predictors.

Conclusion: Our study found a significant relationship between sleep disturbances and clinical motor subtypes. An increased number of sleep-related symptoms had an impact on disease-related disability.

Title: Long-term effects of exercise and physical therapy in people with Parkinson disease.

Citation: Nature reviews. Neurology; Nov 2017; vol. 13 (no. 11); p. 689-703

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Abstract: Parkinson disease (PD) is a progressive, neurodegenerative movement disorder with symptoms reflecting various impairments and functional limitations, such as postural instability, gait disturbance, immobility and falls. In addition to pharmacological and surgical management of PD, exercise and physical therapy interventions are also being actively researched. This Review provides an overview of the effects of PD on physical activity - including muscle weakness, reduced aerobic capacity, gait impairment, balance disorders and falls. Previously published reviews have discussed only the short-term benefits of exercises and physical therapy for people with PD. However, owing to the progressive nature of PD, the present Review focuses on the long-term effects of such interventions. We also discuss exercise-induced neuroplasticity, present data on the possible risks and adverse effects of exercise training, make recommendations for clinical practice, and describe new treatment approaches. Evidence suggests that a minimum of 4 weeks of gait training or 8 weeks of balance training can have positive effects that persist for 3-12 months after treatment completion. Sustained strength training, aerobic training, tai chi or dance therapy lasting at least 12 weeks can produce long-term beneficial effects. Further studies are needed to verify disease-modifying effects of these interventions.

Title: Falls in Parkinson's disease: A complex and evolving picture.

Citation: Movement disorders : official journal of the Movement Disorder Society; Oct 2017

Author(s): Fasano, Alfonso; Canning, Colleen G; Hausdorff, Jeffrey M; Lord, Sue; Rochester, Lynn

Abstract: Falls are a major determinant of poor quality of life, immobilization, and reduced life expectancy in people affected by Parkinson's disease (PD) and in older adults more generally. Although many questions remain, recent research has advanced the

understanding of this complex problem. The goal of this review is to condense new knowledge of falls in PD from prodromal to advanced disease, taking into account risk factors, assessment, and classification as well as treatment. The fundamental steps of clinical and research-based approaches to falls are described, namely, the identification of fall risk factors, clinical and instrumental methods to evaluate and classify fall risk, and the latest evidence to reduce or delay falls in PD. We summarize recent developments, the direction in which the field should be heading, and what can be recommended at this stage. We also provide a practical algorithm for clinicians. © 2017 International Parkinson and Movement Disorder Society.

Title: Housing accessibility problems for people with Parkinson's disease.

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Objectives: Promoting accessible housing for all citizens is high on the political agenda. Knowledge is, however, limited regarding housing accessibility problems for people with Parkinson's disease (PD). The objectives were to investigate housing accessibility problems among people with PD at different stages of disease severity and to analyze the potential impact of improved functional ability on accessibility problems.

Materials and Methods: The study included 253 participants with PD (61% men; mean age 70 years). Disease severity was assessed by the Hoehn and Yahr (HY) I-V stages: HY I, n=50; II, n=73, III, n=66; IV-V, n=64. Using the Housing Enabler (HE) instrument, accessibility problems were investigated by combining assessments of the person's functional capacity with assessments of physical barriers in the housing environment into a person-environment fit measure (HE-score). To analyze potential impact of improved functional ability on housing accessibility problems, data simulation was applied.

Results: HE-scores differed significantly ($P < .001$) in relation to HY stages. Overall balance problems explained 22% and walking devices 17% of the HE-scores, whereas environmental barriers contributed to a lesser extent. The environmental barriers generating the most HE-scores were "no grab bar at shower/bath/toilet" and "wall-mounted cupboards and shelves placed high". A simulation of improved balance significantly ($P < .001$) lowered the HE-scores in all HY stages.

Conclusions: The results suggest that actions targeting balance problems and dependence on walking devices have the greatest potential for reducing housing accessibility problems for people with PD. The study also details environmental barriers that need specific attention when providing housing adaptation services.

Sources Used

The following databases are searched on a regular basis in the development of this bulletin: Amed, British Nursing Index, Cinahl, Medline

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