PARALLEL SESSION 6 – SATURDAY JUNE 22\textsuperscript{nd} 2019, 08h00 – 09h30

Combined symposium 3: Unraveling the relation of depression with somatic conditions

- A. Leentjens: Depression preceding Parkinson’s disease: Risk factor or early symptom?
- C. Webers: Depression in ankylosing spondylitis and the role of disease-related and contextual factors: A structural equation modelling approach
- J. Matta: Diet and physical activity in the association between depression and metabolic syndrome: Constances study
- D. Spieler: Determinants of telomere attrition in older subjects: Is there a role for psycho-social stress? Findings from the prospective population-based KORA cohort study
Depression preceding Parkinson's disease: risk factor or early symptom?

Aim
To explore the possible relation between depression and Parkinson’s disease.

Methods
Narrative review of literature.

Results
Studies in Parkinson’s disease and other chronic conditions point towards a complex interrelation between depression and these diseases. First: depression may precede a diagnosis of Parkinson’s disease, but it is not a specific risk factor, since depression can also precede other diagnoses, such as dementia, stroke, vascular disease, diabetes and various forms of cancer. In addition, distressing syndromes other than depression, such as anxiety and pain, also increase the likelihood of a diagnosis of Parkinson’s disease. Evidence further shows that a diagnosis of Parkinson’s disease itself predisposes to later depression. Finally, even though pathophysiological alterations that constitute a risk for depression occur in all Parkinson patients, only a minority of patients will develop a depression. These observations make it difficult to formulate a pertinent biobehavioral model of depression in Parkinson’s disease.

Conclusion
The relation between depression and Parkinson’s disease is bidirectional and complex. Research has largely focused on Parkinson-specific pathophysiological risk factors for depression. However, non-specific risk factors for depression in the general population, as well as psychological and contextual factors also have to be taken into account in order to come to a more comprehensive etiological model for depression in patients with Parkinson’s disease.

Author(s)
Albert Leentjens ᵃ¹

P: Presenting author

Affiliation(s)
1. Maastricht University Medical Center, Department of Psychiatry, Maastricht, NL
Depression in ankylosing spondylitis and the role of disease-related and contextual factors: a structural equation modelling approach

Aim
To determine which factors contribute to depressive symptoms in ankylosing spondylitis (AS), and to understand the relationships between relevant factors.

Methods
Data from a cross-sectional survey-based multicentre study were used. Potential determinants included both contextual and disease-related factors. Depressive symptoms were assessed by the depression subscale of the Hospital Anxiety and Depression Scale (HADS-D). Direct and indirect associations between determinants and the latent depression outcome were explored using structural equation modelling. A final model was selected based on model fit criteria and clinical plausibility.

Results
Among 245 AS patients, median (interquartile range) HADS-D was 3 (1-6) and 44 patients (18%) had a HADS-D>=8, indicating possible depression. Contextual factors associated with depressive symptoms were male gender, employment, lower income, lower mastery and worse satisfaction with role participation. AS disease activity was the only disease-related factor that contributed to depressive symptoms, and only indirectly. Mastery had a central role in the path diagram and was a mediator for the effects of AS disease activity, income and satisfaction with role participation on depressive symptoms. The final model explained 64% of the variance in the latent depressive symptoms outcome.

Conclusion
Both contextual and disease-related factors contribute to depressive symptoms in AS. Mastery, the extent to which one feels in control over life and disease, has a key role in this process. Results support a relevance of self-efficacy in disease management and patient education. In order to improve patients’ mental health, research is warranted whether mastery and its relation with depression can be modified.

Author(s)
Casper Webers 1,2 / Laura Vanhoof 1 / Carsten Leue 3 / Annelies Boonen 1,2 / Sebastian Köhler 4

P: Presenting author

Affiliation(s)
1. Maastricht University Medical Centre, Rheumatology, Maastricht, NL
2. Maastricht University, Care and Public Health Research Institute (CAPHRI), Maastricht, NL
3. Maastricht University Medical Centre, Psychiatry and Psychology, Maastricht, NL
4. Maastricht University, School for Mental Health and Neuroscience (MHeNS), Maastricht, NL
Diet and physical activity in the association between depression and metabolic syndrome: Constances study

Aim
The association between depression and the metabolic syndrome remains poorly understood. Diet and physical activity may partly explain this association.

Methods
Baseline data on 64,861 subjects from the French population-based Constances cohort was analyzed. Depressive symptoms were determined with the Center of Epidemiologic Studies Depression (CES-D) scale. A CES-D score ≥ 19 combined with self-reported limitations related to depressive symptoms was used to define depression. The metabolic syndrome was defined according to the International Diabetes Federation criteria. Dietary patterns were determined with a food frequency questionnaire and a principal component analysis. Physical activity was measured with 3 questions resulting in a composite 6-point scale. Associations between depression and the metabolic syndrome were estimated through logistic regression and path analysis.

Results
The odds-ratios (95% confidence interval) for the association between depression and the metabolic syndrome, adjusting for age, sex, education and income, was 1.75 (1.57-1.96). The path analysis showed that 23% of this association was explained by diet and physical activity, 67% being attributed to physical activity.

Conclusion
The cross-sectional nature of the analyses warrants the results to be confirmed by longitudinal analyses. Diet and physical activity might partially explain the association between depressive symptoms and metabolic syndrome but other factors (e.g. inflammatory factors) are involved.

Author(s)

P: Presenting author

Affiliation(s)
1. INSERM, U894 Centre of Psychiatry and Neurosciences, Paris, FR
2. Paris Descartes University , Faculty of medicine, PARIS, FR
3. APHP , Psychiatry, PARIS, FR
4. Paris Descartes University , Faculty of medicine, PARIS, FR
5. INSERM, U894 Centre of Psychiatry and Neurosciences, PARIS, FR
6. INSERM , U1153, INCA, CNAM University of Paris 5, 7 and 13, PARIS, FR
7. INRA, ENS, EHESS, CNRS, Centre Maurice Halbwachs UMR 8097, PARIS, FR
8. INSERM , Epidemiological cohorts based unit, UMS 011, Villejuif, FR
9. APHP European Hospital Georges Pompidou, Nutrition, PARIS, FR
10. APHP European Hospital Georges Pompidou, Nutrition, Paris, FR
11. Paris Descartes University, Faculty of Medicine, PARIS, FR
12. INSERM, Epidemiological cohorts based unit, UMS 011, Villejuif, FR
13. Paris Descartes University , Faculty of Medicine, PARIS, FR
Determinants of telomere attrition in older subjects: Is there a role for psychosocial stressors? Findings from the prospective population-based KORA cohort study

Aim
A suggested link between mental stress and shorter leukocyte telomere length (LTL) has not been shown in the elderly. We aim to identify if LTL attrition is affected by stress also in older subjects and if rate of attrition is affected by naturalistic factors such as healthy behaviors, including exercise, and sleep.

Methods
Data are derived from the population-based KORA F4 study and the KORA AGE study, located in southern Germany including n=211 individuals with valid and complete LTL data. LTL was measured using a quantitative PCR-based technique. Psychosocial stress and healthy behavior were assessed in a structured interview and by applying several reliable questionnaires. Bivariate correlations between telomere length, lifestyle behaviors and major life stressors are being performed.

Results
Preliminary results indicate a role for psycho-social stress also in older subjects. Furthermore healthy behavior seems to modify this LTL attrition due to psycho-social stress.

Conclusion
This finding might have implications for understanding telomere biology as well as expectations for possible intervention effects. However both findings need to be replicated in another subgroup of the population-based KORA study.

Author(s)
Derek Spieler 1,2 / Matthias Brauenig 3 / Karl-Heinz Ladwig 4,5

P: Presenting author

Affiliation(s)
1. Uniklinik Freiburg, Department of Psychosomatic Medicine and Psychotherapy, Freiburg, DE
2. Helmholtz Zentrum, Department of Epidemiology, Munich, DE
3. Uniklinik Freiburg, Department of Psychosomatic Medicine and Psychotherapy, Freiburg, DE
4. Helmholtz-Zentrum, Department of Epidemiology, Munich, DE
5. Technical University Munich, Department of Psychosomatic Medicine, Munich, DE