

1.064

THE ROLE OF THE OLFACTORY BULB DA NEURONS ON DEPRESSION IN PARKINSON'S DISEASE

C.-H. Wang, J. Chao, X.-R. Zhu, H.-H. Yuan, D.-S. Gao. *Xuzhou Medical College, Xuzhou, China*

Depression is the most frequent psychopathological finding in Parkinson's disease. Calbindin-D28K is a calcium-binding protein in neuronal cytoplasm, which has the capability to protect DA neurons from degeneration. Over-expression of Calbindin-D28K in DA neurons of Calbindin-D28K transgenic mice can protect Olfactory Bulb DA neurons against MPTP. In an attempt to investigate the role of the Olfactory Bulb DA neurons on Depression in Parkinson's disease, we treated Calbindin-D28K transgenic mice with MPTP (25 mg/kg), twice a week for 5 weeks, and then we detected the change of depressive behavior. We observe Calbindin-D28K transgenic mice exhibited lower activity levels, higher sucrose preference levels and step-down passive avoidance than that in normal mice injected by MPTP. Meanwhile, we damaged Olfactory Bulb DA neurons of a group of mice, found that they exhibited higher activity levels, lower sucrose preference levels and step-down passive avoidance than in wild mice. These results indicated that the increased Olfactory Bulb DA neurons can relief depression in Parkinson's disease.

1.065

PREVALENCE AND CLINICAL CORRELATES OF ANXIETY IN PARKINSON'S DISEASE

T. Yamanishi, H. Tachibana, M. Oguru, K. Kawabata, D. Danno, T. Oku, M. Hashimoto, K. Matsui, K. Matsubara, N. Murata. *Hyogo College of Medicine, Nishinomiya, Japan*

Aims: Although PD is mainly a movement disorder, non-motor symptoms including psychiatric and behavioral problems are frequently observed. Depression has been intensively studied in PD, but less attention has been paid to anxiety. The purpose of this study was to investigate prevalence and clinical correlates of anxiety in PD.

Methods: Fifty-seven patients with PD (mean age, 70.2 years) with mean disease duration of 8.4 years were asked to complete State-Trait anxiety inventory (STAI) to assess anxiety, the Beck depression inventory (BDI) to assess depression, Japanese version of Starkstein's apathy scale (AS) to assess apathy and QOL battery comprising the EQ-5D and PDQ-39 to assess QOL. A complete neurological examination including the Hoehn and Yahr (Yahr) stage, the unified Parkinson's disease rating scale (UPDRS), and mini-mental state examination (MMSE) was performed on the same day.

Results: Anxiety (STAI ≥ 41 for men or ≥ 42 for women) was diagnosed in 63% of the patients. In 42% of the total sample, anxiety coexisted with depression, whereas 16% had depression without anxiety, and 19% anxiety without depression. Twenty-three percent of the PD patients had neither anxiety nor depression. There were significant correlations between STAI and BDI scores ($P < 0.01$) and AS scores ($P < 0.01$). STAI scores were significantly correlated with the scores of both ED-5D ($P < 0.01$) and PDQ-39 ($P < 0.05$). No correlations were found between STAI scores and UPDRS scores or Yahr stages.

Conclusions: Present study suggests that anxiety is common in the PD patients together with depression and is associated with QOL.

1.066

INVESTIGATION ON THE RELATIONSHIP BETWEEN ANXIETY AND THE MOTOR SYMPTOMS OR NON-MOTOR SYMPTOMS IN PATIENTS WITH PARKINSON'S DISEASE

Z. Liu, X. Huang, L. Sun, C. Cao, S. Yu, L. Zuo, W. Zhang. *Beijing Tiantan Hospital, Capital Medical University, Beijing, China*

Objective: To explore the relationship between anxiety and symptoms in PD patients.

Methods: 124 PD patients were collected and assessed by HAMA, and divided into anxiety group and non-anxiety group according to the scores of HAMA. Comparison of the two groups was conducted by using UPDRS, Hoehn-Yahr Staging, NMSQ, HAMD, MMSE, PSQI, ESS, SCOPA-AUT and FS-14.

Results: (1) 42 cases of 124 PD patients (33.87%) were accompanied by anxiety. (2) Results of motor symptoms in two groups were: Hoehn-Yahr Staging: 2.48 ± 0.80 vs. 2.04 ± 0.78 , UPDRS-III: 30.68 ± 9.91 vs. 24.70 ± 12.25 ($P < 0.05$); (3) The number of non-motor symptoms in two groups were 14.57 ± 3.83 vs. 9.90 ± 5.33 ($P < 0.05$); The incidences of non-motor symptoms, i.e. depression, sexual dysfunction, restless legs syndrome, apathy, daytime somnolence, dizziness, pain and nightmare in anxiety group were highly than those in non-anxiety group ($P < 0.05$); (4) Results of non-motor symptoms in two groups were: UPDRS-I: 4.74 ± 1.93 vs. 2.93 ± 1.84 ; HAMD: 19.41 ± 6.97 vs. 9.82 ± 5.83 ; PSQI: 19.48 ± 6.36 vs. 12.37 ± 6.47 ; ESS: 6.69 ± 5.62 vs. 3.56 ± 3.34 ; SCOPA-AUT: 43.48 ± 7.750 vs. 36.76 ± 7.33 ($P < 0.05$), the scores of MMSE and FS-14 in two groups were: 26.12 ± 4.37 vs. 27.16 ± 3.28 and 10.71 ± 2.69 vs. 9.42 ± 3.26 , respectively ($P > 0.05$).

Conclusions: Anxiety in PD associates with motor symptoms. PD patients with anxiety show the higher incidences of most non-motor symptoms.

1.067

NEUROPSYCHOLOGICAL PROFILE OF PATIENTS WITH IDIOPATHIC PARKINSON'S DISEASE

P. Chatterjee¹, D. Joshi¹, B. Kumar², A.Z. Ansari¹, V.N. Mishra¹, R.N. Chaurasia¹, B. Kumar¹, T. Desai¹. ¹Neurology, Institute of Medical Sciences, Banaras Hindu University, ²Psychology, Banaras Hindu University, Varanasi, India

Object: Parkinson's disease (PD) encompasses various debilitating motor and non-motor symptoms (NMS) affecting the lives of millions of people worldwide. Though the motor symptoms can be treated effectively with dopamine replacement therapy but the non-motor symptoms are under-treated as they remain unrecognized. The aim of the present study is to evaluate the neuropsychological deficits of the PD patients.

Material and Method: Thirty patients diagnosed clinically as IPD attending the Neurology outpatient department and/or admitted to the Neurology ward of IMS, BHU, Varanasi were subjected to UPDRS, Hoehn & Yahr stage, and Schwab & England scale to assess the disability and stage of their disease. The of AIIMS comprehensive neuropsychological battery (Hindi) were administered on the patient group as well as 30 age & gender matched control group.

Results: The mean age and duration of the PD patients was 59.9 ± 8.5 and 4.07 ± 3.5 . The patients ranged from 1–4 on H&Y scale with the S&E ADL score of 77.35 ± 15.96 . The 't' test was used to find out the significant difference between the mean T scores of domains namely motor function, expressive speech, reading, writing, arithmetic ability, memory and intellectual functioning between the experimental and control groups. The results revealed significant impairment in patients at various domains as compared to the controls.

Conclusion: Thus the NMS lead to severe disability, impaired QOL and shortened life expectancy. Therefore, the proper management strategies require adequate evaluation.

1.068

BEHAVIORAL CHANGES IN PARKINSON'S DISEASE

M. Petrovic¹, E. Stefanova², V. Kostic². ¹Clinic for Neurology, Clinical Centre Kragujevac, Kragujevac, ²Clinical Centre of Serbia, Belgrade, Serbia

Objective: Behavioral disorders is often associated with Parkinson's disease. The objective of this study was to examine the prevalence and clinical correlates behavioral changes in a clinical population.