An Observational Study of the Mental Health Burden in Frail and Elderly Patients

Dr Yathorshan Shanthakumaran[1,2], Dr Reshma Rasheed[1] and Miss Anjali Patel[3]*

[1]Rigg Milner Medical Centre, East Tilbury, United Kingdom; [2]University Hospitals Plymouth NHS Trust, Plymouth, United Kingdom and [3]New Vision Medical University, Tbilisi, Georgia
*Presenting author.

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Aims. Psychiatric illnesses are common among older adults and are associated with increased mortality and physical comorbidities. It is suggested that patients with frailty have a higher prevalence of depressive symptoms. (1) The eFI (electronic Frailty Index) is a tool used to assess the severity of frailty in elderly frail patients using a cumulative deficit model based on routine interactions with their GP.
Methods. Patients were selected for annual frailty assessments by searching the electronic clinical system (SystmOne) using the eFI tool. Patients were assessed using the Comprehensive Geriatric Assessment (CGA) framework. In addition, all patients were screened for coexisting anxiety and depression using the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) questionnaire.
Results. Of the 118 patients who ranged from mild to severe frailty, we found there was a positive correlation of the frailty severity eFI scores with increased rates of anxiety and depression evidenced by higher scores on the PHQ-9 and GAD-7 scoring tools. We found a positive correlation of the eFI with the PHQ-9 depression scores of ($r = 0.819$ $p < 0.001$). Within the same data set, we found correlation coefficients of eFI and anxiety GAD-7 scores ($r = 0.651$ $p < 0.001$). Increasing frailty was found to be associated with a higher rate of depression and anxiety.
Conclusion. We found in this study higher (eFI) electronic frailty indices are associated with higher rates of anxiety and depression. We would recommend annual frailty assessments in patients with high electronic frailty indices and this should include screening for mental health deterioration. Early detection of deterioration will enable patient centered supportive measures and targeted treatment strategies. Health maintenance programs should ensure patient centered holistic assessment of both physical and mental health needs for early identification to avoid deterioration of both physical and mental health.

Metabolic Effects of Antidepressants; Is It Time to Change the Conversation?

Miss Anjali Patel[1]*, Dr Yathorshan Shanthakumaran[2], Dr Reshma Rasheed[2] and Mr Imaduldin Nazir[1]

[1]New Vision University, Tbilisi, Georgia and [2]Rigg Milner Medical Centre, East Tilbury, United Kingdom
*Presenting author.

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Aims. The incidence of depression has risen both nationally and internationally. The mainstay of management remains referral to IAPT and treatment with SSRI and SNRIs and the rates of prescribing are rising exponentially. During the COVID-19 pandemic, more people faced mental health challenges. In the last ten years, the incidence of SSRI prescribing rose from 6.8% to 100%. A known side effect of antidepressant medication is weight gain, dyslipidemia, increasing risk of impaired fasting glycaemia and diabetes. Our study was conducted to assess the actual risk incurred in our population from the point of starting therapy till date.
Methods. Patients were identified from the GP clinical system (SystmOne) to identify those with a current prescription of antidepressants and antipsychotics. A retrospective analysis of 591 patients' case records was undertaken. Body weight, BMI, fasting glucose, HbA1c, fasting lipids and Q risk were analysed at the time of prescription initiation, post treatment and any rise in cardiovascular risk over a period of years. The data were analysed to see the trajectory of deterioration in metabolic risk. All patients were assessed to ensure they had been signposted and referred to weight management services.
Results. The data show a positive correlation between the onset of antidepressant and antipsychotic prescribing, worsening of BMI, increase of cardiovascular and metabolic risk. The data show an exponential rise in BMI and metabolic risk (cardiovascular Q risk, dyslipidemia, imparied fasting glycaemia, diabetes and ischaemic heart disease) for patients taking SSRI and SNRI within 12 months. This effect continues for the length of the prescribing interval. We also found that with the rise of BMI dose, escalation was common due to reduced effectiveness. The average rise in cardiovascular Q risk average was 14.05% over three years. Patients need careful counselling at the outset and need regular reassessment of metabolic risks at each medication review. Informed consent must be obtained - risks of SSRI, SNRI and antipsychotic risk should be stated.
Conclusion. A known iatrogenic risk of antidepressant medication is weight gain, dyslipidemia, increasing risk of impaired fasting glycaemia and diabetes. Careful counselling and metabolic risk assessment is required when initiating these medications. Throughout the length of prescribing patients need re-assessment of their cardiovascular and diabetes risk with timely referral to weight management services to counterbalance metabolic risks.

A Mixed Method Study of Indian Mothers Assessing Impact of Lockdown in the Understanding and Burden of ADHD in Their Child

Dr Prajakta Patkar*

Topiwala National Medical College and BYL Nair Charitable Hospital, Mumbai, India
*Presenting author.

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Aims. To study the impact of the lockdown (pandemic) in the mother's understanding of the child's disorder (ADHD) and the burden faced by her.
Methods. A mixed method design with a combination of a qualitative and quantitative approach. An in depth in-person semi structured interview with the participant mother was conducted as the qualitative part and the quantitative part of the study consisted of burden assessment by the Zarit Caregiver burden scale pre and post pandemic. The responses were transcribed and themes were identified
Results. As far as understanding of the disorder was concerned, the major themes identified were "Knew about the child's problems from teachers but online schooling made me see the child's issues in person" and "Knew about the illness but more time led to more bonding and more understanding". When questioned about the burden faced, the major themes that evolved were "Increased burden as I felt exhausted taking care of child 24/7" and "Increased burden as I felt angry and irritated with my child, the school and family". The Zarit caregiver questionnaire revealed a statistically significant difference in the burden before and after pandemic with more number of mothers falling in the

mild to moderate & severe category of burden after the commencement of the pandemic.
Conclusion. COVID-19 pandemic increased the caregiver burden for Indian mothers of children with ADHD. They understood a lot more about their child's disorders by spending more time and devised different ways and means of helping their child in academic and other areas.

Assessing Serum Brain Derived Neurotrophic Factor and Matrix MetalloProteinase-9 Levels and Their Correlation With Neurocognitive and Psychosocial Functioning in Bipolar Disorder-I in Remission: A Case-Control Study

Dr Venkatalakshmi Penchilaiya[1]*, Dr Shivanand Kattimani[2], Dr Nandheesha Hanumanthappa[2] and Mr Arivazhagan Karunanithi[2]

[1]Northamptonshire Healthcare NHS Foundation Trust, Northampton, United Kingdom and [2]JIPMER, Pondicherry, India
*Presenting author.

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Aims.
1. To determine the association between serum BDNF, serum MMP-9 and cognitive function test in BD-1 patients in remission and to compare with controls.
2. To assess the current psychosocial functioning of BD-I patients in remission and their correlates.

Methods. Single center case control study.

Cases were BD-I patients in Remission (**n = 60**) and controls (**n = 60**) were age and gender matched healthy persons. The diagnosis of BD-1 was confirmed using **Structured Clinical Interview For DSM-IV-Tr Axis I Disorders –Research Version** along with clinical record. Age group between**18–60 years**, in **remission for at least 2 months** [scoring ≤ 8 on the Hamilton Depression Rating Scale, and ≤ 6 on Young Mania Rating Scale] were included. Those with significant head injury, neurological disorder, substance use disorder, Diabetes/Hypertension and premorbid IQ < 70 were excluded.

Control group were excluded if their first degree relative had any psychiatric illness as elicited using Family Interview for Genetic Studies scale (**FIGS**).

Cognitive functioning was assessed using Addenbrooke's Cognitive Examination version III (**ACE-III**) and Trail making test A and B (**TMT A and TMT B**). Current psychosocial functioning was assessed with Functioning assessment short test (FAST).

Five ml blood sample was taken for estimation of serum BDNF and MMP-9 levels by ELISA.

Chi-square test used to compare categorical variables. **Mann-Whitney U test** for continuous variables. **Spearman's correlation** - evaluate the relationship between scores on the cognitive function tests and serum levels of BDNF and MMP-9, within the group of patients with BD-I.

Results. With regards to cognitive functioning, compared to controls, cases performed significantly poor in domains of **Memory** (Z = −3.435, p = 0.001), **Processing speed** (z=−2.667, p = 0.008), and E**xecutive functioning** (Z= −4.084, p = 0.000).

No statistical difference in levels of serum BDNF and MMP-9 between patients and controls were found.

While BDNF serum levels were not associated with cognitive or psychosocial functioning, there were significant relation between **serum MMP-9 and the various domains of FAST scale and total FAST score (rho = 0.447, p < 0.001).**

BD-I patients exhibited **poor psychosocial functioning** compared to controls even in euthymic state (U = 702.00, p < 0.000).
Conclusion. Patients with BD-I display **poor performance in memory, executive function and psychosocial functioning** even during euthymic state compared to controls.

Serum BDNF and MMP-9 levels comparable to the healthy controls during remission- pointing towards them as **state markers** rather than trait.

Need for **routine evaluation of cognitive functio**n during follow-up visits and f**ocus on target deficits for rehabilitation** for better recovery and improving the quality of life of BD patients.

Associated Mortality Risk of Atypical Antipsychotic Medication in Individuals With Dementia (AMRAAD): A Clinical Cohort Study

Dr Peter Phiri[1,2]*, Dr Tomas Engelthaler[3], Ms Hannah Carr[2], Dr Gayathri Delanerolle[4,1], Professor Clive Holmes[2,1] and Professor Shanaya Rathod[1]

[1]Southern Health NHS Foundation Trust, Southampton, United Kingdom; [2]University of Southampton, Southampton, United Kingdom.; [3]Oxford Centre for Innovation, Oxford, United Kingdom and [4]Nuffield Department of Primary Care Health Sciences, Oxford, United Kingdom
*Presenting author.

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Aims. Antipsychotic medications such as risperidone, olanzapine and aripiprazole are used to treat psychological and behavioural symptoms among dementia patients. Current evidence indicate prescription rates for antipsychotics vary and wider consensus to evaluate clinical epidemiological outcomes is limited. This study aims to investigate the potential impact of atypical antipsychotics on the mortality of patients with dementia.
Methods. A retrospective clinical cohort study was developed to review United Kingdom Clinical Record Interactive Search system based data between January 1, 2013 to December 31, 2017. A descriptive statistical method was used to analyse the data. Mini Mental State Examination (MMSE) scores were used to assess the severity and stage of disease progression. A study specific cox proportional hazards model was developed to evaluate the relationship between survival following diagnosis and other variables.
Results. A total sample size of 1692 patients were identified using natural language processing of which, 587 were prescribed olanzapine, quetiapine, or risperidone (common group) whilst 893 (control group) were not prescribed any antipsychotics. Patients prescribed olanzapine and Risperidone showed similar risk of death [hazard ratio (HR) = 1.32; 95% confidence interval (CI): 1.08–1.60; P < 0.01], (HR = 1.35; 95%CI: 1.18–1.54; P < 0.001). Patients prescribed Quetiapine showed no significant association (HR = 1.09; 95%CI: 0.90–1.34; P = 0.38). Factors associated with a lower risk of death were elevated MMSE score at diagnosis (HR = 0.72; 95%CI: 0.62–0.83; P < 0.001) along with other demographic factors such as women (HR = 0.73; 95%CI: 0.64–0.82; P < 0.001) and being of a Caucasian British group (HR = 0.82; 95%CI: 0.72–0.94; P < 0.01).
Conclusion. A significant mortality risk was identified among those prescribed olanzapine and risperidone which contradicts previous findings although the study designs used were different. Comprehensive research should be conducted to better assess clinical epidemiological outcomes associated with diagnosis and therapies to improve clinical management of these patients.