Results: A total of 6.8% (87/1287) of persons died of natural causes. There were 70 deaths in the schizophrenia and 17 in the bipolar disorder participants. The mean age at death of those who died from natural causes was 56.7 years (range 19.4 – 79.1 years). The standardized mortality ratio (SMR), the age-adjusted ratio of the number of observed deaths in this study sample to that expected in the general population, was 2.57 (95% CI 1.24 – 4.75).

Natural cause mortality was predicted in a multivariate model by baseline cigarette smoking (RR=6.29, 95% CI 1.41, 3.72, p=0.00076); divorced or widowed status (RR=1.90, CI 1.21, 2.99); reduced cognitive score (RR=0.73, CI 0.61, 0.87); receipt of antidepressant medication (RR=1.74, CI 1.12, 2.71); elevated levels of antibodies to Epstein Barr Virus (EBV) (RR=1.29, CI 1.01, 1.66); and a genitourinary (RR 1.82, CI 1.16, 2.86), respiratory (RR 1.82, CI 1.16, 2.86), or cardiac (RR 2.09, CI 1.33, 3.29) condition.

Interaction models showed evidence of additive effects of smoking and both cardiac and respiratory condition. Compared to non-smokers without a cardiac condition, non-smokers with a cardiac condition had a more than threefold elevation of mortality risk (RR=3.76, 95% CI 1.47 – 9.63, p=0.0057) as did smokers without a cardiac condition (RR=3.63, 95% CI 1.49 – 8.85, p=0.0046), while the presence of both smoking and a cardiac condition increased mortality risk by more than six-fold (RR=6.75, 95% CI 2.84 – 16.0, p<0.0001). Compared to non-smokers without a respiratory condition, mortality risk more than doubled for non-smokers with a respiratory condition (RR=2.30, 95% CI 0.97 – 5.46, p=0.058), as well as for smokers without a respiratory condition (RR=2.37, 95% CI 1.31 – 4.28, p=0.0044), while the mortality risk more than quadrupled for smokers with a respiratory condition (RR=4.72, 95% CI 2.45 – 9.09, p<0.0001). There was not a significant interaction between smoking and elevated EBV antibody levels. There was a synergistic effect of antidepressant use and cardiac disease on mortality risk; participants with both risk factors had a more than six-fold increased risk (RR=6.75, 95% CI 2.84 – 16.0, p<0.0001). Compared to non-smokers with a cardiac condition, mortality risk more than doubled for non-smokers with a cardiac condition (RR=3.63, 95% CI 1.31 – 4.28, p=0.0044), while the mortality risk more than quadrupled for smokers with a cardiac condition (RR=6.29, 95% CI 1.41 – 3.72, p=0.00076); divorced or widowed status (RR=1.90, CI 1.21, 2.99); reduced cognitive score (RR=0.73, CI 0.61, 0.87); receipt of antidepressant medication (RR=1.74, CI 1.12, 2.71); elevated levels of antibodies to Epstein Barr Virus (EBV) (RR=1.29, CI 1.01, 1.66); and a genitourinary (RR 1.82, CI 1.16, 2.86), respiratory (RR 1.82, CI 1.16, 2.86), or cardiac (RR 2.09, CI 1.33, 3.29) condition.

Discussion: Multiple factors contribute to the excess mortality of persons with schizophrenia and bipolar disorder, but cigarette smoking is a major preventative cause. The delivery of smoking cessation treatments should be prioritized in persons with psychotic disorders.

O5.6. SUBMISSION WITHDRAWN

O5.7. RISK OF DIABETIC COMPLICATIONS AND SUBSEQUENT MORTALITY AMONG INDIVIDUALS WITH SCHIZOPHRENIA AND DIABETES MELLITUS: A NATIONWIDE POPULATION-BASED REGISTER STUDY

Anita Tonder Nielsen1,2, Mogens Vestergaard1, Trine Munk-Olsen1, Jette Kolding Kristensen1, Thomas Munk Laursen1
1The National Centre for Register-based Research, Aarhus University, Institute of General Medical Practice, Aarhus University; 2National Centre for Register-Based Research, Aarhus University, The Lundbeck Foundation Initiative for Integrative Psychiatric Research (iPSYCH)

Background: Schizophrenia constitutes a high risk of morbidity and mortality from physical illness. Individuals with comorbid schizophrenia and diabetes mellitus have been found to have a three- to four-fold higher rate of death than the general population, which may be explained by a higher rate of diabetes complications.

Methods: We used the Danish National Diabetes Registry and the National Register-based Research database to identify a cohort of persons with schizophrenia or bipolar disorder and diabetes mellitus. We identified 1511 individuals with both schizophrenia or bipolar disorder and diabetes mellitus from 1997 to 2016. We compared the risk of diabetes complications and mortality among these individuals with a population-based control group of persons who had diabetes mellitus but no schizophrenia or bipolar disorder.

Results: The incidence of diabetes complications was higher among persons with schizophrenia or bipolar disorder and diabetes mellitus than among controls. The risk of diabetes complications was highest among persons with schizophrenia and was relatively similar among persons with bipolar disorder and diabetes mellitus. The risk of diabetes complications was also highest among persons with diabetes mellitus and schizophrenia for the first time in their life.

Discussion: The results of this study suggest that persons with schizophrenia and diabetes mellitus are at high risk of diabetes complications. These findings highlight the importance of implementing preventive strategies to reduce the risk of diabetes complications in persons with schizophrenia and diabetes mellitus.
O6. Oral Session: Neuroimaging

O6.1. HIPPOCAMPAL VOLUME IN ADOLESCENTS WITH PERSISTENT PSYCHOTIC EXPERIENCES: A LONGITUDINAL POPULATION-BASED MRI STUDY

Ana Calvo1, Erik O’Hanlon1, Helen Coughlan2, Ian Kelleher2, Mary Clarke1, Mary Cannon3
1Universidad Internacional de La Rioja; 2Royal College of Surgeons in Ireland

Background: Individuals with schizophrenia show significant brain morphological abnormalities. The ENIGMA consortium identified that patients with schizophrenia had smaller hippocampus, amygdala, thalamus, accumbens and intracranial volumes. Reduced hippocampal volume is one of the most consistent findings in schizophrenia research. Also, Previous research has reported differences in hippocampal volume and white matter integrity in young adolescents who report psychotic experiences. However there has been little longitudinal research to investigate the developmental trajectory of these regions in adolescence with an increased susceptibility to psychotic disorders.

Aims: to investigate two-year longitudinal changes in hippocampal volume in a sample of adolescents who reported psychotic experiences relative to their peers. To investigate the role of presence of co-morbid DSM IV mental disorders and stressful life events in influencing hippocampal volume and study the differences in hippocampus volume between adolescents who were having persistent symptoms versus adolescents with remitting symptoms.

Methods: A longitudinal case-control study of 50 community-based adolescents aged 13–16 years (25 with psychotic experiences and a matched sample of 25 without psychotic experiences), compared hippocampal volume. All participants were assessed at baseline and two years follow up. TI weighted anatomical high-resolution imaging and high angular resolution diffusion imaging data were used to conduct quantitative anatomical volumetric evaluations of global hippocampal volume. Clinical interviews also provided information on psychotic experiences, co-morbid disorders and adverse life events.

Results: There were significant differences in the Right and Left Whole hippocampus between PE and Control group at baseline and 2-year follow up (p<0.05). There were significant differences between PE persist and Control group in the left and right whole hippocampus (p<0.05).

Discussion: The differences identified in our study suggest that early hippocampal reductions, may play a role in increasing vulnerability to psychosis.

References:

O6.2. NEUROBIOLOGY OF PSYCHOMETRIC SCHIZOTYPY: INSIGHTS FROM MULTIMODAL IMAGING RESEARCH

Gemma Modinos, Alice Egerton, David J. Lythgoe, Gareth J. Barker, Katrina McMullen, Christian Keyser, André Aleman, Veena Kumari, Steven CR Williams

1Institute of Psychiatry, Psychology & Neuroscience, King’s College London; 2Netherlands Institute for Neuroscience, Netherlands Academy for Arts and Sciences, KNAW, University of Amsterdam; 3University of Groningen, University Medical Hospital Groningen

Background: The continuum approach to psychosis proposes a dimensional continuity between the neurobiology of subclinical psychotic-like experiences in healthy individuals (or schizotypy) and psychotic symptoms in clinically relevant psychosis (Linscott and van Os, 2013, Nelson et al., 2013). Preclinical models propose that cortical glutamate dysfunction related to cortico-limbic-striatal hyper-responsivity to stress may underlie both hippocampal and striatal overdrive as well as grey matter loss associated with schizophrenia-like behaviors (Berretta et al., 2001, Lodge and