Poster Session II

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M86. CAN WEIGHT GAIN CAUSE METABOLIC SYNDROME A DECADE LATER IN PATIENTS WITH SCHIZOPHRENIA SPECTRUM DISORDER?

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Background: Patients with schizophrenia spectrum disorder have a reduced life expectancy with up to 20 years. Obesity and metabolic syndrome is highly prevalent and cardio vascular disease, CVD, remain the most common cause of the excess mortality. Despite studies showing the reduced life expectancy and its causes the patients with schizophrenia spectrum disorder yet remain to benefit of the development of the healthcare. In this study we aim to focus on how the weight changes in different age groups and when do the cluster of conditions of metabolic syndrome start to occur.

Methods: In this naturalistic study we follow 71 patients, 47 men and 24 women diagnosed with schizophrenia spectrum disorder. We divided the patients into 5 different groups based on age. Group 1 aged 20–30 years, Group 2 aged 31–40 years, Group 3 aged 41–50 years, group 4 aged 51–60 years and Group 5 aged 61 years and older. The longest time of observation was 18 years. Data on weight (kg) and disorders such as diabetes, hypertension and dyslipidemia were collected at baseline and then yearly thereafter. Data from baseline and the last yearly follow up were included in this study. Weight and the presence of the cluster of conditions that make up metabolic syndrome in the above-mentioned groups were analyzed.

Results: Patients in group 1 make the highest gain of weight with 0.9 kg per year and group 2 with the least gain of weight only 0.01 kg per year. Patients in group 3 have a weight loss of 0.2 kg per year. At endpoint 9 out 19 patients in group 3 and 11 out of 21 patients in group 4 were treated for one, two or three conditions of the metabolic syndrome.

Discussion: In our study we show that weight gain appears at least 10 years before the development of metabolic syndrome. Despite the loss of weight that appear in group 3 the negative effects of the weight gained a decade earlier may be a factor that make patients aged 41 years and older to be at risk of developing metabolic syndrome.

M87. PREVALENCE OF AUTOIMMUNE DISEASES IN INDIVIDUALS WITH PRIMARY PSYCHOTIC DISORDERS AT BOSTON MEDICAL CENTER

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Background: The prevalence of autoimmune diseases is higher among individuals with psychiatric illnesses than in the general population. It is unknown if the prevalence of autoimmune diseases differs among people with different primary psychotic disorders. Our objective was to assess whether the prevalence of autoimmune diseases differs among people with schizophrenia/schizoaffective disorder, affective (bipolar/depression) psychosis, and other psychotic disorders (delusional, brief psychotic, schizoaffective, or unspecified psychosis).

Methods: For our cross-sectional study, we used International Classification of Diseases (ICD) codes to identify individuals with primary psychotic disorders/unspecified psychoses who received treatment at Boston Medical Center between October 2003 and May 2019. Individuals with other/unspecified psychosis with an organic cause and individuals with unspecified psychosis, brief psychotic disorder with coinciding drug withdrawal, post-partum psychosis, or drug-induced mental illness, confusion, or seizure were excluded. Autoimmune diseases were categorized as systemic or as one of seven organ-specific subgroups (dermatological, endocrinological, gastroenterological, hematological, non-systemic connective tissue, and neurological). Multivariable logistic regression was used to compare differences in prevalence of autoimmune diseases among individuals with different psychoses adjusting for age, sex, and race. We also considered sex and race-stratified analyses.

Results: Of the 13,938 individuals (mean age = 43 years; 58% male) diagnosed with psychosis, 55% had schizophrenia, 17% had affective psychosis, and 29% had other/unspecified psychosis. Overall, nearly 9% of individuals with psychosis had at least one autoimmune disease (8% with schizophrenia, 11% with affective psychosis, and 8% with other/unspecified psychosis). The most prevalent autoimmune disease subgroups were systemic (39%), dermatological (26%), and endocrinological (23%). Compared to individuals with schizophrenia, individuals with affective psychosis had increased odds of having any autoimmune disease (OR: 1.38; 95% CI: 1.17, 1.63), dermatological autoimmune diseases (OR: 1.55; 95% CI: 1.15, 2.07), or endocrinological autoimmune diseases (OR: 1.56; 95% CI: 1.14, 2.12). Compared to individuals with schizoaffective as the only psychosis diagnosis, individuals with affective psychosis had increased odds of having any autoimmune disease (OR: 1.31; 95% CI: 1.03, 1.66) and...
individuals with schizophrenia had decreased odds of having neurological autoimmune diseases (OR: 0.46; 95% CI: 0.23, 0.96). Among individuals with any psychotic disorder, females were 95% more likely to have any autoimmune disease (OR: 1.95; 95% CI: 1.72, 2.20). No racial differences were observed overall; however, compared to individuals who identified as white, individuals who identified as Black, Hispanic, and Asian had decreased odds of having gastroenterological autoimmune diseases (OR: 0.52; 95% CI: 0.35, 0.76), neurological autoimmune diseases (OR: 0.32; 95% CI: 0.10, 0.83), and systemic autoimmune diseases (OR: 0.25; 95% CI: 0.04, 0.88), respectively, while Black individuals had increased odds of having systemic autoimmune diseases (OR: 1.45; 95% CI: 1.17, 1.81).

Discussion: The prevalence of autoimmune diseases varied among people with different primary psychotic disorders, and certain associations were modified by sex and race. Clinicians may consider additional screening for autoimmune diseases among individuals with psychosis.

M88. EVIDENCE FOR INFLAMMATION AS A PUTATIVE SHARED MECHANISM FOR INSULIN RESISTANCE AND SCHIZOPHRENIA

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Background: Insulin Resistance (IR) predisposes to cardiometabolic disorders, which are common in schizophrenia and are associated with excess morbidity and mortality. The mechanisms of association remain unknown. We aimed 1) To use genetic data to examine the direction of association between IR and related cardiometabolic risk factors, and schizophrenia; 2) To examine whether inflammation could be a shared mechanism for IR and schizophrenia.

Methods: We used two-sample uni-variable Mendelian randomization (MR) to examine whether genetically-predicted IR-related cardiometabolic risk factors (Fasting insulin (FI), high-density lipoprotein (HDL), triglycerides (TG), low-density lipoprotein, fasting plasma glucose, glycated haemoglobin, leptin) and inflammatory markers (C-reactive protein (CRP), interleukin-6 (IL-6), tumour necrosis factor (TNF)) could be causally associated with schizophrenia. We used the most recent summary statistics for genetic variants associated with schizophrenia and IR-related cardiometabolic risk factors from publicly-available large genome-wide association studies (GWAS). We used bi-directional MR to examine direction of association. To examine whether inflammation could be a shared mechanism for IR and schizophrenia, we first conducted a sensitivity analysis by performing MR using only cardiometabolic genetic variants that were also associated with inflammation, at genome-wide significance. Second, we used multi-variable MR (MVMR) to examine associations between cardiometabolic risk factors and schizophrenia after adjusting for genetically-predicted levels of C-reactive protein.

Results: In analyses using all associated genetic variants, genetically predicted levels of leptin were associated with risk of schizophrenia (OR=2.54 per SD increase in leptin; 95% CI, 1.02–6.31). In analyses using inflammation-related variants, genetically predicted levels of FI (OR=2.76 per SD increase in FI; 95% CI, 1.31–6.17), TG (OR=2.90 per SD increase in TG; 95% CI, 1.36–6.17), and HDL (OR=0.56 per SD increase in HDL; 95% CI, 0.37–0.83) were associated with schizophrenia. The associations completely attenuated in MVMR analyses controlling for CRP. There was no evidence of an association between genetically-predicted schizophrenia liability and cardiometabolic factors.

Discussion: The IR phenotype of FI, TG and HDL could be associated with schizophrenia over and above common sociodemographic and lifestyle factors. This association is likely explained by a common inflammatory mechanism. Interventional studies are required to test whether inflammation could represent a putative therapeutic target for the treatment and prevention of cardiometabolic disorders in schizophrenia.

M89. PHARMACOLOGICAL INTERVENTIONS FOR SMOKING CESSION AMONG PEOPLE WITH SCHIZOPHRENIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: People living with schizophrenia are 3 times more likely to smoke than the general population, and have fewer and less successful quitting attempts. In concert with psychosocial quit interventions, there is a need for evidence based pharmacological interventions to assist people living with schizophrenia achieve smoking abstinence.

Methods: We systematically searched PubMed, PsyCInfo, EMBASE and Cochrane for randomised controlled trials of pharmacological interventions for reducing smoking among people living with schizophrenia. We conducted pairwise and network meta-analyses of effectiveness of interventions for achieving abstinence and reduction in smoking. We also examined psychiatric and physical adverse events of interventions.

Results: Nineteen studies were included in the systematic review. Data was available for bupropion, varenicline and nicotine replacement therapy (NRT). Bupropion (RR 3.4, 95%CI 1.6–7.3, p=0.002), varenicline (RR 3.8, 95%CI 2.0–7.2, p<0.001) and NRT (RR 4.3, 95%CI 1.7–10.7, p=0.002) were all associated with increased rates of abstinence in pairwise meta-analyses. In a network meta-analysis varenicline was superior to bupropion (RR 2.0, 95%CI 1.0–3.9), however there was no statistically significant difference between varenicline and NRT or bupropion and NRT. Varenicline was associated with higher rates of nausea than placebo.

Discussion: Bupropion, varenicline and NRT were all superior to placebo for achieving abstinence. Varenicline appears to be superior to bupropion for achieving abstinence, however varenicline is associated with higher rates of nausea.

M90. CANNABIS USE, CIGARETTE SMOKING, AND PSYCHOTIC EXPERIENCES IN ADOLESCENCE AND DIAGNOSIS OF PSYCHOSIS IN EARLY ADULTHOOD. A BIRTH-COHORT STUDY

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Background: Recent studies indicate that adolescent cannabis use (1) and cigarette smoking (2) increase the risk for psychosis. However, less is known about symptom profile associated with cannabis use and cigarette smoking prior to the psychotic episodes. Our aim was to study the associations between daily smoking, life-time cannabis use, and psychotic experiences in adolescence, and their relationship with psychotic disorders in early adulthood.

Methods: The Northern Finland Birth Cohort 1986 study includes 99% of all births (n=9432) in the region. At age 15–16, data on self-reported daily cannabis smoking and cannabis use was gathered using questionnaires. Psychotic experiences during past 6 months were evaluated using PRDScreen (3). Psychiatric diagnoses were collected from four Finnish nationwide health-care registers until year 2016, when participants were 30–31 years old. Individuals with information on daily smoking, cannabis use and psychotic experiences (n=6037, 47.7% male, 64.0% of the total...