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Sex-related differences in medical cannabis use: A nation-wide database study

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Introduction: Cannabis use is associated with mental illness among men and women, especially induction or exacerbation of psychosis, anxiety, and depression. Although safety and efficacy of cannabis in most medical conditions have not been established, use of medical cannabis is growing exponentially. In particular, albeit sex-related differences in the activity of the endocannabinoid system in animals and humans, differential effects of cannabis on men and women have rarely been sought.

Objectives: To characterize patterns of use and adverse effects experienced by men and women using medical cannabis.

Methods: Data from the Israeli national database of patients licensed to use medical cannabis in Israel from January 2014 to December 2021 was analyzed. The database includes indications for cannabis use, monthly cannabis quantities, Tetrahydrocannabinol (THC) and Cannabidiol (CBD) concentrations, and reports of adverse effects. Comparative statistics were used to evaluate the sex related differences.

Results: 161,644 persons (62% men) were issued a license to use medical cannabis during the study period. Men are significantly younger than women (50.5±19.1 vs. 56.5±18.4). The leading indications among both men and women are chronic pain (58% of men, 57% of women), symptoms related to oncological disease and chemotherapy treatment (21% of men, 24% of women) and post-traumatic stress disorder (9% of men, 6% of women). Men consume significantly higher monthly quantities at the beginning of treatment compared to women (31.6 gram vs. 29.3 gram) with a higher THC concentration (13.9% vs. 11.6%) and lower CBD concentration (5.3% vs. 6.7%). Over two years of use, there is an increase among both men and women in the amount and THC concentration, and a decrease in the CBD concentration. The differences between men and women remain significant throughout the whole period. Data on adverse effects are available for 28,629 men and 17,204 women (28.6% of men, 28.0% of women). Women report significantly more physical adverse effects (RR 1.48 [95%CI 1.39-1.57]), anxiety (RR 1.45 [95%CI 1.35-1.56]), depression (RR 1.36 [95%CI 0.95-1.96]) and derealization (RR 3.44 [95%CI 2.42-4.89]).

Conclusions: Although the prevalence of medical conditions for which medical cannabis is indicated are similar for both genders, approximately 60% more men consume medical cannabis. While consuming lower cannabis amount and THC concentration, women report more physical and psychiatric adverse effects than men. Understanding the differences in usage patterns and adverse effects between men and women will enable more accurate policy determinations and more effective and safer treatment strategies.

Disclosure of Interest: None Declared

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Use of systemic hormonal contraception and depression: a nested case-control study

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Introduction: Depression is twice as common in women as in men, especially in the young age group. Multiple factors may contribute to this gender difference. Growing attention is being focused on the role of sex hormones, including those of hormonal contraception (HC). Some recent studies have indicated a higher risk of depression among women using HC, although the results are inconclusive.

Objectives: The aim of this study is to examine the associations between the use of hormonal contraception and the risk of depression in childbearing age women.

Methods: The original cohorts for the study included all women aged 15-49 years with at least one redeemed prescriptions for HC in Finland in 2017 (n=294,356), and a 1:1 age-matched cohort of non-users. After exclusion of prevalent cases (n=35,102), all incident cases of depression (as recorded in the Care Register of Health Care and Register of Primary Health Care Visits) in 2018-2019 were identified (n=23,480), and a 4:1 age-matched control group (n=93,920) was selected from the above cohorts. Current use of HC in the 180 days before the event was compared in cases and controls, and associations with risk of depression were tested via conditional multivariate logistic regression models.

Results: During the follow-up, 23,480 incident cases of depression were identified. Current use (in the 180 days before the event) of HC (OR 0.82, 95% CI 0.79-0.85), in particular of estradiol- or ethinylestradiol-containing combined HC was associated with a lower risk of depression (OR 0.83, 95% CI 0.76-0.89; OR 0.74, 95% CI 0.71-0.78, respectively) compared to non-use of HC. The results remained significant (OR 0.87, 95% CI 0.81-0.95; and OR 0.77, 95% CI 0.73-0.81, respectively) after controlling for covariates (marital and socioeconomic status, education level, chronic diseases). Use of progestin-only contraception was not associated with altered risk of depression.

Conclusions: Use of HC in childbearing age women is not associated with increased risk of depression. Rather, the use of estradiol- or ethinylestradiol-containing HC is associated with a lower risk of depression.

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Bipolar Disorders and Suicidology and Suicide Prevention

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Associations between polygenic loading, psychosis liability, and clozapine use

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Introduction: Predictors consistently associated with psychosis liability and course of illness in schizophrenia (SCZ) spectrum disorders (SSD), including the need for clozapine treatment, are lacking. Longitudinally ascertained medication use may empower studies examining associations between polygenic risk scores (PRSs) and pharmacotherapy choices.

Objectives: To examine associations between PRS-SCZ loading and groups with different liabilities to SSD: individuals with SSD on clozapine, individuals with SSD on other antipsychotics, their parents and siblings, and unrelated healthy controls; and between PRS-SCZ and the likelihood of receiving a prescription of clozapine relative to other antipsychotics.

Methods: Design: Six-year follow-up and cross-sectional observational cohort study.

Setting: Multi-center.

Participants: Individuals diagnosed with SSD using clozapine or other antipsychotics, their parents and siblings, and unrelated healthy controls.

Exposure: PRS-SCZ.

Main Outcomes and Measures: We used multinomial logistic regression to examine possible differences between groups by computing risk ratios (RRs), i.e., ratios of the probability of pertaining to a particular group divided by the probability of healthy control status. We also computed PRS-informed odd ratios (ORs) for clozapine use relative to other antipsychotics.

Results: PRSs-SCZ were generated for 2344 participants (mean age: 36.95 years; 42.4% female) remaining after quality control (557 individuals with SSD on clozapine, 350 individuals with SSD on other antipsychotics during six-year follow-up, 542 parents and 574 siblings of individuals with SSD, and 321 unrelated healthy controls). All RRs were significantly different from 1; RRs were highest for individuals with SSD on clozapine ($RR=3.24$ [95%CI 2.76-3.81], $p=2.47 \times 10^{-46}$), followed by individuals with SSD on other antipsychotics ($RR=2.30$ [95%CI 1.95-2.72], $p=3.77 \times 10^{-22}$), parents ($RR=1.44$ [95%CI 1.25-1.68], $p=1.76 \times 10^{-6}$), and siblings ($RR=1.40$ [95%CI 1.21-1.63], $p=8.22 \times 10^{-6}$). PRS-SCZ was positively associated with clozapine versus other antipsychotic use ($OR=1.41$ [95%CI 1.22-1.63], $p=2.98 \times 10^{-6}$), suggesting a higher likelihood of clozapine prescriptions in individuals with higher PRS-SCZ.

Conclusions: PRS-SCZ loading differs between groups of individuals with SSD, their relatives, and unrelated healthy controls, with clozapine users being at the far end of PRS-SCZ loading. Additionally, PRS-SCZ is associated with a higher likelihood of clozapine prescribing. Our findings may inform early intervention and prognostic studies into the value of PRS-SCZ for personalized antipsychotic treatment.

Disclosure of Interest: None Declared

O0054

Combination therapy for bipolar disorder : What to combine and which cautions to take ?

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Introduction: Bipolar disorder is one of the leading causes of disability among young adults. Given the heterogeneity of the disorder and the complexity of its etiopathogenesis, combination therapy is often considered as part of the treatment regimen.

Objectives: To assess the place of non-pharmacological interventions as a co-adjuvant to pharmacological treatment, to discuss the role of polytherapy in the management of bipolar disorder and to underline the drug to drug interactions to keep in mind.

Methods: We present a critical review of recent international recommendations for the management of bipolar disorder. Two main evidence-based guidelines were included: The 2020 Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders and The 2018 Canadian Network for Mood and Anxiety Treatment.

Results: According to guidelines, the outcomes in bipolar disorder are improved when medication is combined with evidence-based psychological treatment and lifestyle changes. As to polytherapy, it is often recommended to maximise the treatment efficacy. Studies have shown that combination treatments tend to work faster and more effectively than monotherapy especially in episodes with higher index severity. For the management of agitation, an adjunctive treatment by Haloperidol with midazolam or promethazine can be prescribed. In acute mania, combination therapy with quetiapine, aripiprazole, risperidone or asenapine and lithium or divalproex is recommended as first-line treatment options. Combinations of mood-stabilizing drugs may be more often necessary when rapid cycling is present. In a manic episode with mixed features the use of divalproex with an atypical antipsychotic is recommended. In bipolar I depression, lurasidone and lamotrigine are often used as adjunctive therapies. When anxious distress is present, the combination of olanzapine and fluoxetine has shown to be effective. In a depression with atypical features, tranylcypromine (IMAO) can be added to lithium, divalproex or a second generation antipsychotic for a better result. Adjunctive treatment of olanzapine with fluoxetine may be necessary in a depression with mixed features. However, in bipolar II depression and for maintenance treatment no adjunctive therapies are recommended. Finally, it is important to consider the adverse effects resulting from polytherapy. Using lithium as an adjunctive medication may increase the risk of tremor and acute dystonic reactions and can be a contributing factor for neuroleptic malignant syndrome, whereas divalproex can be an inducer or an inhibitor of some atypical antipsychotics.

Conclusions: Rational polytherapy allows better and faster control over symptoms of bipolar disorder and should be considered after a detailed discussion of risks and benefits.

Disclosure of Interest: None Declared

O0055

Evaluation of factors that may influence the development of chronic kidney disease in patients with bipolar disorder treated with lithium.

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