Results: The effects of antidepressants on athletes are inconsistent, with some studies indicating no significant change in performance, while others report reduced endurance. Paroxetine and fluoxetine, commonly prescribed SSRIs, may impair endurance due to increased serotonin levels, which can exacerbate fatigue, known as central fatigue hypothesis. It is also emphasized that SSRIs may reduce athletic performance, especially under thermal stress, by affecting thermoregulation, alongside its interference in serotonin pathways. Potential metabolic impact of these drugs was found, as chronic exposure to SSRIs showed modulation of glucose uptake, mitochondrial respiration, and muscle mass. Furthermore, SSRIs also induced changes in electrical muscle activity.
Conclusions: The evidence on the effects of antidepressants, particularly SSRIs, on physical performance and muscle function remains inconclusive. Athletes and healthcare providers must weigh these risks carefully, considering both the clinical and ethical implications of psychotropic drug use in competitive sports. Therefore, future research should focus on more consistent study protocols and explore the long-term metabolic consequences of SSRIs in physically active populations.

Disclosure of Interest: None Declared

EPV1569

Evolutionary History and Phylogeny of Biochemical Functions of Hypericin and Hyperforin in Hypericum spp

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Introduction: Hypericum spp., particularly Hypericum perforatum (such as St. John's Wort), produce hypericin and hyperforin, secondary metabolites that play critical roles in the plant's defense mechanisms. These compounds, characterized by their polycyclic and lipophilic properties, have evolved to deter herbivores and protect against pathogens. Understanding the evolutionary pressures that shaped these compounds enhances our knowledge of their biochemical roles.
Objectives: This review aims to synthesize current knowledge on the evolutionary development of hypericin and hyperforin within the Hypericum genus, focusing on how these metabolites evolved to fulfill defensive ecological functions.
Methods: A comprehensive literature review was conducted, examining phylogenomic studies, structural analyses, and biochemical research related to the biosynthesis of hypericin and hyperforin. We reviewed relevant phylogenetic data to understand the diversification of these compounds across Hypericum spp.
Results: The literature supports that hypericin and hyperforin evolved in response to selective pressures during the Cretaceous-Paleogene boundary, with their complex polycyclic aromatic structures optimized for defense. These structures, which include conjugated π-systems, are central to the compounds' ability to deter herbivores and resist pathogens, reflecting an evolutionary adaptation that is conserved across the genus.
Conclusions: The evolution of hypericin and hyperforin within Hypericum spp. is a prime example of how secondary metabolites serve dual purposes in nature and human use. The phylogenetic and biochemical insights reviewed highlight the importance of these compounds as both ecological defenses and pharmacologically active agents.

Disclosure of Interest: None Declared

EPV1570

Perspectives of the use of Perampanel in Psychiatric Symptoms

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Introduction: Perampanel is a selective antagonist of the AMPA receptor for glutamate, primarily approved for the treatment of certain types of epilepsy. With the evolving understanding of psychiatric disorders' neurobiology, it's hypothesized that targeting the glutamatergic system could offer substantial therapeutic benefits (Perversi F, Costa C, Labate A, Lattanzi S, Liguori C, Maschio M, et al. The broad-spectrum activity of perampanel: state of the art and future perspective of AMPA antagonism beyond epilepsy. Front Neurol [Internet]. 2023 [cited 2024 Sep 2] ;14:1182304).
Objectives: The purpose of this study is to evaluate the effectiveness of perampanel in managing psychiatric symptoms such as sleep disturbances, depression, anxiety, and irritability.
Methods: A comprehensive review of scientific studies was carried out, centering on clinical trials and observational research that explored the application of perampanel in individuals exhibiting psychiatric symptoms. The review included articles published between 2013 and 2024, utilizing databases like PubMed, Scopus, and PsycINFO for sourcing. The inclusion criteria covered studies that assessed the impact of perampanel on psychiatric conditions, detailing both the clinical results and any side effects.
Results: Findings indicate that perampanel may have beneficial effects in reducing symptoms of insomnia (Abenza-Abildúa MJ, Suárez-Gisbert E, Thuissard-Vasallo IJ, Andreu-Vazquez C. Perampanel in chronic insomnia. Clin Neurol Neurosurg. 2020 May 1;192), depression and anxiety (Scorrano G, Lattanzi S, Salpietro V, Giannini C, Chiarelli F, Matricardi S. The Cognitive and Behavioural Effects of Perampanel in Children with Neurodevelopmental Disorders: A Systematic Review. J Clin Med [Internet]. 2024 Jan 10 [cited 2024 Sep 3];13(2)) in certain patient groups. However, significant adverse effects were also reported, including behavioural changes and increased aggression in some cases, necessitating careful monitoring during treatment.
Conclusions: Numerous antiepileptic medications have been effectively utilized in treating psychiatric conditions. Perampanel, in particular, has demonstrated effectiveness in managing nocturnal seizures, preserving sleep architecture, and treating restless legs syndrome. A study conducted in Spain revealed that combining perampanel with either an antidepressant or an anxiolytic significantly enhances sleep quality after three months in patients without epilepsy (Abenza-Abildúa MJ, Suárez-Gisbert E, Thuissard-Vasallo IJ, Andreu-Vazquez C. Perampanel in chronic insomnia. Clin Neurol Neurosurg. 2020 May 1;192).

While there are no large-scale clinical trials specifically targeting mood disorders, some ongoing research is exploring the broader psychiatric effects of Perampanel, including its impact on anxiety disorders.

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EPV1571

Long acting injectables: new therapeutic weapons in the battle for shortening the Duration of Untreated Psychosis

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Introduction: Duration of untreated psychosis (DUP) is defined as the time from manifestation of the first psychotic symptom to initiation of adequate antipsychotic drug treatment. It is associated with poorer response rates to antipsychotic medications and impaired cognition, which traslates in worse positive and negative symtomps. Various hypotheses for how untreated psychosis could impact brain function have been proposed. Dopaminergic hyperactivity leading to a progressive reduction in regional brain volumes and oxidative injury due to persistent catecholaminergic activity and prolonged activation of the hypothalamic–pituitary–adrenal axis provide possible explanations for how chronic psychosis could be neurotoxic. In addition, glutamate-mediated excitotoxicity may also contribute to these effects through neuronal overstimulation that leads to an excessive influx of calcium and subsequent excitotoxicity and, ultimately, cell death via apoptosis.
Objectives: To analyze the advantages of long-acting injectable therapy in the treatment of psychotic disorders in patients with prolongued duration of untreated psychosis with a case communication.
Methods: We present a 61 year old female patient, native of a rural area of Peru who moved to Spain and started treatment in our outpatient department. She does not provide any medical report. The family reports that she began to present symptoms from her first pregnancy, and has had to be admitted to hospital several times for suicide attempts. She had never taken any antipsychotic drug. During the last 30 years she developed symptoms consisting of erotomaniac and paranoid delusional ideation, cenesthetic and auditory hallucinations, soliloquy, self care deficit and disorganised speech and behaviour. She presented periods of maniac mood. As a result, she ended up isolated, taken care by his father and highly dependent on instrumental activities of daily living.
Results: Treatment with Risperidone was started, although the patient presented poor adherence to it. She was finally admitted to hospital for a month and we introduced once-monthly Risperidone and Valproate with significant clinical improvement.
Conclusions: Long acting injectables are a good therapeutic option in patients with psychotic disorders, even with prolongued duration of untreated psychosis.

Disclosure of Interest: None Declared

EPV1572

Long term effects of cariprazine add-on therapy in the patients with risperidone induced hyperprolactinemia

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Introduction: The treatment strategies for antipsychotics induced hyperprolactinemia apart from switching to prolactine-sparing antipsychotics, reducing the doses of antipsychotics and adding dopamine agonists such is bromocriptine, include add-on therapy with third generation antipsychotics (aripiprazole, cariprazine)
During the previous years, some studies with adjunctive aripiprazole therapy have been conducted, however the research with cariprazine in this purpose are absent.
Objectives: The main goal of this research is to analyse both short-term and long-term changes in the level of prolactine after adding cariprazine in the long acting risperidone treatment of patients with psychotic disorders.
Methods: Six inpatients threated during the first three months of 2024, that were consecutive diagnosed with hyperprolactinemia induced by long acting risperidone Depo therapy, were included for the participation in this research. For all study participants, the long acting antipsychotics therapy was previously used for more than 3 months and in all of them other possible causes of hyperprolactinemia were excluded by neuroimaging procedures and examinations of consultant endocrinologist. After starting adjunctive therapy with cariprazine in the dose range between 1.5 and 3mg daily, for at least three weeks, while risperidone therapy remained at the same dose, prolactine levels were firstly re-examined. The second control of prolactine levels were done after 6 months.
Results: All patients were diagnosed with ICD 10 categories of psychotic disorders, 2 of them (33.3%) with F20 category (Schizophrenia), 3 of them (50%) with F 29 category (nonspecific psychosis) and 1 of them (16,6%) with F23 category (acute psychosis). On average age of the patients were 37,6 years, 3 of them had male and 3 female sex. Prolactine base values (T0) were between 612 mlU/L and 4051,53 mlU/L (on average 2150,7 mlU/L). After introducing cariprazine adjunctive therapy for at least three weeks, the levels of prolactine (T1) substantially declined in five out of six patients (83,3%). This second values of prolactine were in the range between 306 mlU/L and 2014,4 mlU/L which represents 22,9% to 67% reduction of their initial level (on average 47,34%). In only one study case, the prolactine level has raised from 667,73 to 765,88 (14,7%). The third value of prolactine (T2) were re-examined after the 6 months of introducing the cariprazine treatment and values of prolactine remained at low levels.
Conclusions: The main conclusion of this pilot study can be that cariprazine adjunctive therapy is valuable pharmacological intervention for the treatment of risperidone induced hyperprolactinemia and that these effects sustain over the 6 months period. However, the number of participants in this research is rather small, and for that reason, further investigation at the bigger number of participants are necessary for definite conclusions.