

bursts and 3 pulses of 50 Hz each). The protocol consisted in delivering 2 sessions per day for 15 days (separated by 55 minutes), 4 minutes per session (3600 pulses/session), 30 sessions in total. An intensity of 100% of resting motor threshold (C4). TMS was performed with the Magventure Magpro X100 MagOption equipment, Cool DB-80 double cone coil. The Child Behaviour Checklist (CBCL) for parents was used to assess intervention effects.

Results: CBCL results reflect improvements in both internalising and externalising total scores after treatment. Specifically, the patient presents clinically significant decreases in several dimensions such as anxious/depressed symptoms, somatic complaints, and social problems. No adverse effects have been reported since the beginning of the intervention.

Conclusions: Internalising and externalising behaviours severity were reduced after 30 TMS sessions. In accordance with the latest systematic reviews on the safety of TMS in the paediatric patient (Zewdie et al, 2020) we propose the development of paediatric guidelines to offer this technique to patients with a history of intolerance or poor drug response.

Disclosure of Interest: None Declared

EPP0015

Long-term neurotoxicity in paediatric patients exposed to general anesthesia

Is there a relationship between exposure to general anesthesia in children between 0 and 4 years of age and the subsequent development of ADHD in childhood?

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Introduction: The Food and Drug Administration (FDA) recently issued new warnings about the possible effects of the repeated or prolonged use of general anaesthesia and sedatives on the brain development of children under 4 years old during surgeries or paediatric procedures.

Objectives: To evaluate the possible long-term neurotoxic impact the exposure to general anaesthesia has on the paediatric population from 0 to 4 years, which is the period during which the brain develops.

Methods: Initially, a search for observational studies that described the risk of neurotoxicity and alterations in the long-term cognitive development of children exposed to general anaesthesia before 4 years of age, was performed in PubMed between 2016 and 2020.

Results: Finally, 5 retrospective cohort studies comparing children exposed and not exposed to general anaesthesia were included in this study. None of these showed significant differences in their main study variables. However, three of these studies found significant differences in some of the secondary variables such as speed of processing, motor skills, internalization of behaviour and learning, and attention deficit hyperactivity disorder (ADHD).

Conclusions: In vitro and in vivo studies of anesthetics have shown serious neurotoxic effects in the developing brain. However, the clinical relevance of these findings for children undergoing anesthesia remains unclear.

Most of these studies suggest a strong relationship between exposure to anesthesia in children aged 0 to 4 years, this being greater after multiple exposures. Despite these results, many of these articles conclude that further research is needed on this topic.

Disclosure of Interest: None Declared

EPP0016

The risk of alcohol use disorders in offspring who had hyperactivity problems: The ALSPAC study

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Introduction: There is a paucity of population-based longitudinal studies examining the associations between childhood behavioural problems and alcohol use disorders in later life.

Objectives: This study aimed to examine the association between hyperactivity/inattention problems in early adolescence and the risk of alcohol use disorders in young adulthood.

Methods: We used data from the Avon Longitudinal Study of Parents and Children (ALSPAC), a population-based prospective cohort based in Bristol, United Kingdom. Hyperactivity/inattention problems at 11 years of age were measured using the Strengths and Difficulties Questionnaire (SDQ). Logistic regression analyses were used to examine associations. E-values (E) were calculated to estimate the extent of unmeasured confounding.

Results: Hyperactivity/ inattention problems in early adolescence were associated with a 1.75-fold increased risk of any alcohol use disorders (OR = 1.75, 95% CI: 1.20-2.56; E= 2.90, CI: 1.69) and a 4-fold increased risk of severe alcohol use disorders at age 24 (OR = 4.35, 95% CI: 2.00 – 9.47; E= 8.17, CI: 3.58). We also found a 2.09 (OR = 2.09, 95 % CI: 1.24-3.53; E= 3.60, CI: 1.79) and 1.63-fold (OR = 1.63, 95% CI: 1.07 – 2.49; E= 2.64, CI: 1.34) increased risk of alcohol dependence symptoms and alcohol abuse symptoms at age 24 in offspring who had hyperactivity problems at age 11, respectively.

Conclusions: Hyperactivity/ inattention problems in early adolescence were associated with an increased risk of alcohol use disorder symptoms in adulthood, even when controlling for conduct problems. Associations did not appear to differ by gender and unmeasured or unknown confounders were unlikely to alter the observed associations.

Disclosure of Interest: None Declared

EPP0017

Comparison of irritability, sleep and chronotype characteristics in children with Anxiety Disorder and ADHD

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Introduction: Attention deficit and hyperactivity disorder (ADHD) and Anxiety disorder (AD) are psychiatric conditions that should be kept in mind in every child and adolescent presenting with irritability. It is known that circadian rhythm disorders and especially the evening type chronotype are associated with ADHD and AD symptoms.

Objectives: In this study, it was aimed to reveal the relationship between the chronotype and sleep habits and the level of irritability between the two groups in children and adolescents with AD and ADHD.

Methods: In this cross-sectional study, 38 cases diagnosed with AD for the first time, 38 cases diagnosed with ADHD for the first time, and 76 healthy control groups without any psychiatric disorder or physical disease were included in this cross-sectional study. In the study, the sleep habits of the participants were evaluated with the Child Sleep Habits Questionnaire (CIAA); the chronotype preferences of the participants with the Child Chronotype Questionnaire (CCTQ) and the irritability levels of the children with the Affective Reactivity Index parent report form (ARI-P)

Results: It was observed that the AD and ADHD groups had significantly higher ARI-P, CCTQ and CIAA scores compared to the control group. In the correlation analysis, when ADHD and AD were evaluated alone, no significant difference was found between CIAA and ARI-P. The ADHD group had higher CCTQ and ARI-P scores, although not statistically significant, compared to the AD group. Although there was no significant relationship in the AD group, a weak relationship was found between CIAA and ARI-P in the ADHD group.

Conclusions: In our study, it was observed that the evening type chronotype was more prevalent in children with ADHD and AD, and sleep disorders and irritability were more common than the control group. When ADHD and AD groups were compared, no statistically significant difference was found. In the literature, it has been stated that evening chronotype carries a higher risk in terms of psychopathology, irritability seen at a young age can predict anxiety and mood disorders in adulthood, and irritability seen in ADHD can predict mood disorders that occur during follow-up. In this context, investigating the relationship between irritability, sleep disorders and chronotype on the basis of psychopathologies can make important contributions to the literature.

Disclosure of Interest: None Declared

Classification of mental disorders / Intellectual Disability

EPP0018

Taxonomy of psychopathology based on a neurochemical framework

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Introduction: Temperament and mental illness are considered to be variations along the same continuum of imbalance in the neurophysiological regulation of behaviour.

Objectives: This presentation presents the benefits of constructivism approach to psychiatric taxonomies.

Methods: The presentation reviews findings in neurochemistry that link temperament traits in healthy individuals and symptoms of psychiatric disorders to complex relationships between neurotransmitter systems.

Results: Specialization between neurotransmitter systems underlying temperament traits is analyzed here from a functional ecology perspective that considers the structure of adult temperament corresponding to the functional structure of human activities. In contrast to a more popular search for neuroanatomic biomarkers of psychopathology and temperament traits in healthy individuals, this presentation focuses on neurochemistry-based biomarkers. The roles of monoamine neurotransmitters (serotonin, dopamine, noradrenalin), as well as the roles of acetylcholine, neuropeptides and opioid receptor systems in the regulation of specific dynamical properties of behaviour are summarized within the neurochemical Functional Ensemble of Temperament (FET) model (Table 1) (Trofimova & Robbins, Neurosci Biobehav Rev, 2016, 64, 382-402; Trofimova, Neuropsychobiology, 2021, 80(2), 101-133).

Image 2:

Behavioural aspect	Beh. orientation & expansion of d.f.	Speed of integration of actions	Cycle maintenance systems
CBP type	Wide context, probabilistic, implicit aspects: MA, ACh, GG as leads		
T-CBP ≈ N	Probabilistic processing, PRO Glu, NE, ACh	Ease of change in actions: Plasticity, PL DA+ACh, 5-HT, GG	Mental (Intellectual) Endurance, ERI ACh, 5HT
C-CBP < N	Low intelligence and comprehension (possible) Narcissistic PD	Rigidity (rituals in OCD)	Inability to focus as part of the ADHD
C-CBP > N	Part of schizophrenia	Excessive start-ups without finishing them (e.g. in ADHD, mania)	Obsessions, as part of OCD
Context	Complex, novel	Changeable	Requires monitoring
Social-verbal aspects, tuning actions to other people: OXY, Estr as leads			
T-CBP ≈ N	Empathy, EMP OXT+VSP	Social Tempo, TMS DA+Estr	Social Endurance, ERS 5-HT+Estr, H
C-CBP < N	Autistic disorders	Expressive language problems	Social withdrawal
C-CBP > N	Dependent PD	Mania	Histrionic PD
Context	Resonance to others	Fast communication	Long communication
Physical aspects, determined by physical capacities: 5-HT, ORE, H and NPs as leads			
T-CBP ≈ N	Sensation Seeking, SS Tstr, NE/Adr, -Cort	Physical (Motor) Tempo, TMM DA+GABA, A, ACh, NP	Physical (Motor) Endurance, ERM 5-HT+ORE, H, NP
C-CBP < N	Generalised Anxiety	Motor retardation and slowdown, Parkinson D.	Fatigue, sleep problems
C-CBP > N	Antisociality, to bust low HPA arousal	Physical agitation	Athletic ability for endurance
Context	Exceptional tasks	Fast physical routines	Long physical routines
Emotional amplifiers: OR, HPA and GC as leads			
T-CBP ≈ N	Neuroticism, NEU KOR, GC>MOR KOR→NE-HPA,	Spontaneity, Impulsivity, IMP Tstr, DOR→(DA, MOR)	(Disp) Satisfaction, SF MOR→KOR, GC MOR→(5-HT,DA)
C-CBP < N	Indifference, detachment	Inability to be playful or spontaneous	Dysphoria, pessimism, low confidence
C-CBP > N	Low tolerance to novelty/uncertainty, perceptual alertness	Premature integration of actions, behavioural reactivity, impulsivity	Too relaxed dispositions, over-optimism
Context	Uncertainty	Emergency	Safety, support

Conclusions: The FET framework allows having a neurochemistry-based structure of a taxonomy that can classify both, healthy bio-psychological traits and symptoms of psychopathology. The presentation will give examples of how the FET framework can be used in psychiatry and clinical psychology.

Disclosure of Interest: None Declared