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Introduction Anorexia nervosa (AN) is the most severe in terms of morbidity psychiatric illness with the highest mortality rate increased by 23 fold. Treatments are limited effectiveness. AN has a strong genetic component with heritability at 70% but despite ~200 studies no major gene was identified. Epigenetics, such as DNA methylation, is another component of heritability that could explain the high heritability. Methylation is poorly studied in AN from small samples, and is focused on few candidate genes among publications. Under publication, a first genome-wide methylation study investigated 10 restrictive type AN patients, 19 bingeing/purging type of AN patients and 15 normal eaters using DNAs from whole blood (Booij, 2015). Of the 480K CpG sites that can be methylated of Infinium Human Methylation450 BeadChip Kit, authors focused on 24,000 sites located close to genes and they identified candidate genes with a different profile of methylation between AN and controls.

Objectives Our work is to replicate the results of Booji and also to investigate the AN remitters.

Aims Our goal is to identify epigenetic signatures of the AN disorder and the prognostic of remission.

Methods Twenty-four AN patients, 24 AN remitters will be compared to 48 healthy control women for methylation using the Infinium Human Methylation450.

Results As Booji et al., we will compare methylation for 24,000 sites located close to genes for 24 AN, 24 remitters and 48 controls.

Conclusions We expected to replicate the published results of Booji and to identify genes with a methylation signature specific of the AN remission.

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S41

Whole-genome epigenetic changes genome regarding childhood maltreatment in patients with borderline personality disorder or depression

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Early life adversity plays a critical role in the emergence of borderline personality disorder (BPD) and this could occur through epigenetic programming. In this perspective, we aimed to determine whether childhood maltreatment could durably modify epigenetic processes by the means of a whole-genome methylation scan of BPD subjects. Using the Illumina Infinium[®] Human Methylation450 BeadChip, global methylation status of DNA extracted from peripheral blood leucocytes was correlated to the severity of childhood maltreatment in 96 BPD subjects suffering from a high level of child adversity and 93 subjects suffering from major depressive

disorder (MDD) and reporting a low rate of child maltreatment. Several CpGs within or near the following genes (*IL17RA*, *miR124-3*, *KCNQ2*, *EFNB1*, *OCA2*, *MFAP2*, *RPH3AL*, *WDR60*, *CST9L*, *EP400*, *A2ML1*, *NT5DC2*, *FAM163A* and *SPSB2*) were found to be differently methylated, either in BPD compared with MDD or in relation to the severity of childhood maltreatment. A highly relevant biological result was observed for cg04927004 close to *miR124-3* that was significantly associated with BPD and severity of childhood maltreatment. *miR124-3* codes for a microRNA (miRNA) targeting several genes previously found to be associated with BPD such as *NR3C1*. Our results highlight the potentially important role played by miRNAs in the etiology of neuropsychiatric disorders such as BPD and the usefulness of using methylome-wide association studies to uncover such candidate genes. Moreover, they offer new understanding of the impact of maltreatments on biological processes leading to diseases and may ultimately result in the identification of relevant biomarkers.

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European alliances against depression: 4-level interventions targeting depression and suicidal behaviour

S42

Community-based 4-level approach: Background, implementation and evidence for efficacy

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The community-based 4-level-intervention concept developed within the “European Alliance against Depression” (<http://www.eaad.net/>) combines two important aims: to improve the care and treatment of patients with depression and to prevent suicidal behavior. It has been shown to be effective concerning the prevention of suicidal behavior [1–4] and is worldwide the most broadly implemented community-based intervention targeting depression and suicidal behavior. The 4-level intervention concept comprises training and support of primary care providers (level 1), a professional public relation campaign (level 2), training of community facilitators (teacher, priests, geriatric caregivers,

pharmacists, journalists) (level 3), and support for self-help of patients with depression and for their relatives (level 4). In order to deepen the understanding of factors influencing the effectiveness of the intervention, a systematic implementation research and process analysis was performed within the EU-funded study “Optimizing Suicide Prevention Programs and Their Implementation in Europe” (<http://www.ospi-europe.com/>; 7th Framework Programme) [5]. These analyses were based on data from four intervention and four control regions from four European countries. In addition to intervention effects on suicidal behaviour, a variety of intermediate outcomes (e.g. changes in attitude or knowledge in different populations) were considered. Strong synergistic as well as catalytic effects were identified as a result of being active simultaneously at four different levels. Predictable and unpredictable obstacles to a successful implementation of such community-based programs will be discussed. Via the EAAD, the intervention concept and materials (available in eight different languages) are offered to interested region in and outside of Europe.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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Hallucinations and delusions in schizophrenia: From phenomenology to neurobiology

S43

Hallucinations without delusions in patients with first-episode psychosis: Clinical correlates and implications for pathophysiological models

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Introduction The symptomatic distribution in schizophrenia spectrum disorder is heterogeneous. Patients may experience hallucinations, delusions and combinations thereof, in addition to disorganized and negative symptoms. We have previously found that patients with monosymptomatic hallucinations exhibited a different clinical profile than patients with monosymptomatic delusions or combinations of the two; with an earlier age at onset and more suicidal symptoms.

Aims To replicate findings in a new group of patients with schizophrenia spectrum disorders.

Methods A total of 421 consecutive patients with schizophrenia spectrum disorders were included into the study. They were comprehensively assessed by specifically trained psychiatrists or clinical psychologists; using the SCID for DSM-IV for diagnostic purposes, the PANSS to assess current clinical symptoms and CDSS to assess current depression. Lifetime presence of different symptom types was ascertained during the diagnostic interview.

Results A total of 346 (82%) had experienced both hallucinations and delusion, 63 (15%) had experienced delusions without hallucinations, 10 (2.5%) had experienced hallucinations without delusions and 2 patients (0.5%) had neither but experienced negative and severely disorganized symptoms. Contrary to hypothesis,

we did not find any statistically significant differences in age at onset and in clinical symptoms (including suicidality) between these groups. We also did not find any differences in the type of hallucinatory experiences between hallucinating groups.

Conclusions In a new sample of patients, we did not replicate previous findings of a different clinical profile in patients with monosymptomatic hallucinations. This type of psychotic disorder is relatively rare, which might pose a problem concerning statistical strength.

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S44

Abnormal time experience, bizarre delusions and verbal-acoustic hallucinations in schizophrenia

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The integrity of time consciousness is the condition of possibility of the identity through time of an object of perception as well as of the person who perceives it. I will present our findings about abnormal time experience (ATE) in people with schizophrenia. These data may support the following hypothesis: if the continuity of temporal experience disintegrates (of which ATE are experiential manifestations), overarching meaningful units are no longer available, thereby creating temporal gaps, e.g., in one’s stream of consciousness. In some cases, thoughts that are no longer experienced as embedded in one’s stream of thoughts are experienced as, e.g., thought interferences, blockages, insertion or withdrawal. These symptoms cannot be explained as a mere disturbance of attention or comprehension at the level of semantic combinations. Rather, the disturbance could be searched for at a more basic level where the temporal coherence of conscious awareness is constituted. A failure of the constitutive temporal synthesis may create micro-gaps of conscious experience. In the most severe cases, thoughts or other mental phenomena that are no longer embedded in the continuity of basic self-experience may appear in consciousness as “erratic blocks” and experienced as being inserted, or, if further externalized, as auditory hallucinations (“voices”). This coheres with the hypothesis that a breakdown of temporality may be bound up with the breakdown of prereflexive self-awareness.

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Improving clinical outcomes through technology: An innovative approach proposal

S45

Smartphone based treatment in bipolar disorder

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E-mental health technologies are under great development and the use is of these technologies is increasing rapidly.