Background: In the last years, thousands of refugees have come to Norway and other Western countries. However, mental health services for adults with ID and additional mental illnesses within the migrant population is an understudied topic. Clinical experience indicates that professionals struggle when providing services to adults with ID and additional mental health issues in this population. Objectives: The objective of this study was to investigate the families’ experiences of mental health services for a family member with intellectual disability. In addition, we wanted to know if there is need for special adjustments in the assessment and treatment of patients with ID in the migrant population. Methods: As this is an understudied topic, we chose a qualitative approach. Three families and the patients’ residential caregivers were interviewed. The interviews were taped, transcribed and consequently analysed. Results: The families expressed that the employment of professional interpretation would have been an advantage when communicating with mental health services. The professional lingua and psychiatric diagnoses may be unknown, and it could be difficult to describe symptoms and difficulties related to mental disorders, lacking specific language for such problems. The professional caregivers supported the answers from the families. Conclusion: The findings in this pilot study are in line with findings of studies examining mental health in the general migrant population. Mental health services for adults with intellectual disability in the migrant population must include the families.

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**GENETICS, ETIOPATHOGENESIS, AND TRAINING**

**INDIVIDUAL PAPERS**

**Advantages and Caveats of Neurobehavioral and Cognitive Assessment in Rare Genetic Disorders With Moderate to Profound Intellectual Disabilities**

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**KEYWORDS** genetics; neuropsychology; psychopathology

Background: The increase in defined genetic causes of intellectual disabilities (ID) creates the need for instruments which differentiate between the level of functioning and syndrome-specific neurobehavioral and cognitive characteristics. The present study investigates the use of four simplified tablet-based neuropsychological test (CANTAB) and a semi-structured clinical observation (ADOS-2) in patients with rare genetic syndromes who have moderate to profound ID. Method: Inclusion comprised a biological age above 3 years and a genetically confirmed causative monogenetic disorder resulting in ID. In total, 56 subjects participated. The Vineland Adaptive Behavior Scale interview was completed to calculate a developmental age. Thereafter, the subjects performed the Autism Diagnostic Observation Schedule-2
(ADOS-2) and four simplified tasks of the Cambridge Neuropsychological Test Automated Battery (CANTAB), the Motor Screening Test (MOT), Pattern Recognition Memory (PRM), the Intra-Extra Dimensional Test Shift (IED), and Paired Associate Learning (PAL). Results: For the CANTAB, a cut-off in the developmental age was defined at which test application was successful. Correlations were assessed between test performance and subject characteristics. Overall performance was also measured for ADOS-2, and specific factors within the ADOS-2 were distinguished for clinical importance. Discussion: Our results indicate an additional value of using simplified CANTAB tasks and the ADOS-2 in the ID population to differentiate between the level of ID and syndrome-specific neurobehavioral and cognitive features. The results of these tests are helpful in diagnostic procedures, formulating personalized treatment and guidance as well as to enhance specific knowledge about genetic syndromes.

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Neurological and Psychiatric Phenotype in Adults With 22q11.2 Deletion Syndrome and Basal Ganglia Calcifications

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KEYWORDS genetics; neurobiology; psychiatric disorders

Aims: Calcifications of the basal ganglia (BGC) are observed in about 0.5–1.0% of routine computed tomography brain (CT) scans. BGC can indicate a calcium metabolism disorder and may be associated with a variety of psychiatric and neurological symptoms. In 22q11.2 deletion syndrome (22q11.2DS), in addition to intellectual disability, there is an elevated lifetime risk of hypoparathyroidism/hypocalcemia (~80%), psychiatric and neurologic manifestations, including psychotic disorders (~25%), seizures (~40%), and movement disorders. The potential connections between these manifestations are however poorly understood. Methods: To begin to address the potential effects of BGC in 22q11.2DS, we reviewed lifetime medical records for relevant clinical data in individuals with BGC from a well-characterized Canadian adult 22q11.2DS cohort (n = 286, median age 30.6 years; n = 86 with CT scan data). Results: Ten (11.6%) of 86 adults (6 male, 4 female; median age 39 (24–57) years) with 22q11.2DS and CT data had BGC (6 bilateral, 1 unilateral, 3 unspecified), detected at median age 22.5 (17–56) years. Although seizures were the most common known reason for CT (4/8, 50%), there was a lifetime history in all 100% of psychotic disorder, 9 (90%) of movement abnormalities (4 tremors, 4 tardive dyskinesia, 2 rigidity), and 8 (80%) of seizures. Nine (90%) had a history of hypoparathyroidism/hypocalcemia. Conclusions: The results support an association of 22q11.2DS with BGC, and the possibility that neurological and psychiatric features may be particularly prevalent in these patients. Future studies are needed to understand how brain calcification may relate to the neuropsychiatric phenotype of 22q11.2DS.

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