

based on the Illinois Test of Psycholinguistic Abilities, standardized in healthy Greek children.

RESULTS: Children with IGE performed significantly poorer in all subtests except the auditory closure subtest (Table 1). No significant difference was found between the 2 subgroups. A negative correlation was found between disease duration and the score in auditory memory ($r = -0.368$; $P = .025$).

TABLE 1. Athina Test for the Diagnosis of LDs

	Subjects With Inadequate Performance, %		P
	Children With IGE	Healthy Children	
Auditory memory	64.9	9.0	.000
Visual memory	43.2	9.0	.000
Grammatic closure	43.2	9.0	.000
Auditory closure	16.2	9.0	.125
Graphophonological awareness	32.4	9.0	.000
Visual-motor coordination	43.2	25.0	.010

CONCLUSIONS: Our results suggest an increased risk of LDs in children with IGE and well-controlled seizures. Early detection of the cognitive impact of IGE and subsequent intervention are needed to prevent educational underachievement.

MULTIDISCIPLINARY MEDICAL EVALUATION OF CHILDREN YOUNGER THAN 7.5 YEARS BORN AFTER PREIMPLANTATION GENETIC DIAGNOSIS FOR MONOGENIC DISEASES

Submitted by Loretta Thomaidis

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INTRODUCTION: The growing cohort of children conceived after preimplantation genetic diagnosis (PGD) techniques underlines the importance of evaluating potential risks for their developmental outcome. There are some data concerning the incidence of congenital anomalies, medical status, and cognitive development of children conceived after PGD techniques, based mainly on reports and not on objective medical evaluation.

OBJECTIVE: We sought to perform multidisciplinary evaluation (physical, genetic, and developmental) of 31 children conceived after PGD techniques (aged 30 days to 7.5 years) and the stress level of parents who used PGD regarding their parental role.

METHODS: Among 24 couples at risk for transmitting monogenic diseases and with an unsuccessful reproductive history, 31 children conceived after PGD techniques were examined. Genetic examination was performed by 2 independent geneticists, and developmental assess-

ment included formal testing of cognitive and motor skills (Bayley scales, Griffiths scales, Athina test). Parental stress was measured by using the Parent Stress Index-Short Form (PSI-SF), a self-report questionnaire that assesses parental stress. The PSI-SF was also completed by 35 parents of naturally conceived, healthy children matched for age, gender, and socioeconomic level.

RESULTS: A high rate of cesarean deliveries were reported, but no higher risk was found for perinatal complications. The increased incidence of prematurity and low birth weight among children conceived after PGD techniques did not seem to affect their growth development later in life. Major malformations (cardiac, gastrointestinal, urogenital, skeletal) were present in 4 (12.9%) of 31 children, with a discrepancy between singletons and multiples. A significant number of children conceived after PGD techniques (6 of 31 [19%]), mostly multiple, premature, and small-for-gestational-age infants, experienced low levels of cognitive, verbal, and perceptual abilities (Global Development Quotient scores of <85). Parents who used PGD experienced lower levels of parenting stress compared with controls ($P < .05$).

CONCLUSIONS: Children conceived after PGD techniques seem to be at greater risk for exhibiting congenital malformations and lower cognitive skills. Whether these observations are linked to the PGD procedure itself, rather than to subfertility, multiplicity, or prematurity, is a question that is difficult to answer. An unexpected finding was that once parents who used PGD finally had what they struggled for (a healthy infant), the stresses of parenthood may have been offset by a broader sense of fulfillment.

LINGUISTIC DEVELOPMENT OF CHILDREN WITH WILLIAMS SYNDROME: A CONTROL STUDY

Submitted by Loretta Thomaidis

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INTRODUCTION: Williams Syndrome (WS; Online Mendelian Inheritance in Man No. 194050) is a rare

syndrome that has attracted a great deal of attention because of an uneven neurolinguistic profile characterized by relative strengths in language, facial processing, and social cognition in the context of poorer spatial cognition, planning, and problem solving. WS has also been used as evidence for the existence of dissociations within subsystems of the language module itself. It has been reported that individuals with WS perform better on grammatical versus lexical tasks and on regular versus irregular forms.

OBJECTIVE: This study addressed 2 main questions: (1) Do individuals with WS show differences between language and cognition? (2) Do individuals with WS perform differently across tasks that tap different aspects of language?

METHODS: We investigated nonverbal and verbal abilities of 20 Greek-speaking children with WS (aged 6–18 years with molecular definition of chromosome 7 deletions) and compared their performance to a group of 20 normal children aged 4 to 10 years. The 2 groups were matched on language ability (comprehension and expression) through the Diagnostic Verbal IQ Test. Verbal ability was measured by 3 experimental linguistic measures that assessed comprehension of pronouns and production of verbs and nouns.

RESULTS: Nonverbal IQ was low and ranged from 40 to 68 points. Those in the WS group, as a whole, showed unimpaired performance on pronouns but faced difficulties in using verbs and nouns. Great variation in performance was evident, which highlights the heterogeneity of the group. A subgroup of individuals with WS showed clear dissociations between language and cognition and within language.

CONCLUSIONS: Our results indicate that (1) there is a clear dissociation between language and cognition and (2) children with WS show strengths on some aspects of their linguistic development.

A NORMAL LIFE WITH AN UNHEALTHY BODY: SELF-IDENTITY IN ADOLESCENTS GROWING UP WITH CHRONIC ILLNESS

Submitted by AnneLoes Van Staa

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INTRODUCTION: Chronic illness is often described in terms of biographic disruption. However, for those growing up with congenital disorders, an unhealthy body is the norm. An important developmental task in adolescence is the formation of self-identity. How does a

chronic disorder influence the development of self-identity in adolescents?

OBJECTIVE: Our aim was to investigate attitudes and preferences of adolescents living with chronic disorders.

METHODS: A qualitative study was conducted by using semistructured interviews that focused on daily life issues. The sample consisted of 31 adolescents (aged 12–19 years) with various chronic disorders who were randomly selected from the patient database of Erasmus Medical Center-Agia Sophia Children's Hospital. Data analysis was performed by using a qualitative analysis computer program (ATLAS.ti, Berlin, Germany).

RESULTS: For most adolescents with chronic disorders, living with illness is "normal." By comparing themselves with healthy peers, they recurrently stress their own normality. They strongly agreed with the statement, "I am like everyone else, my illness is something extra." Therefore, disclosure of health problems remains a sensitive issue, and contact with fellow patients is not often sought. Most held optimistic views about their futures, and only a minority told problematic accounts of the acceptance of their dysfunctional bodies.

CONCLUSIONS: Normalization of an unhealthy childhood seems to be an important strategy in identity-forming in adolescents. It may be interpreted as denial, but adolescents consider denial to be "dangerous" and "stupid." We view normalization as a strategy to accept reality while preventing illness to dominate their life: "I try not to think about it, not because it scares me, but because it's there."

Endocrinology

LYMPHOCYTES IN PERIPHERAL BLOOD AND THYROID TISSUE IN CHILDREN WITH GRAVES' DISEASE

Submitted by Iwona Ben-Skowronek

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OBJECTIVE: Our goal was to analyze interactions of lymphocytes in peripheral blood and thyroid tissue in children with Graves' disease (GD).

METHODS: The prospective study concerned 15 children affected with GD and 15 healthy children. The levels of autoantibodies against thyrotropin receptor, thyroid peroxidase, and thyroglobulin were assayed. Monoclonal antibodies (Ortho Diagnostic Systems, Raritan, NJ) were used to define peripheral blood lymphocyte subsets and analyzed by using a flow cytometer. After thyroidectomy, thyroid specimens were stained

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