The Impact of Developmental Behavioral Pediatrics in a Pediatric Down Syndrome Clinic

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BACKGROUND

Trisomy 21, or Down syndrome (DS), is the most common chromosomal disorder among children.

Children with DS have a unique developmental profile with an increased risk for co-morbid neurodevelopmental diagnoses, including autism spectrum disorder (ASD), anxiety, and attention deficit/hyperactivity disorder (ADHD), among others.

A delay in a diagnosis of these conditions can impact the health and psychosocial wellbeing of the child and family.

OBJECTIVES/AIMS

In an academic pediatric DS specialty clinic, the clinical re-organization included placing the clinic under direction of the Division of Developmental Behavioral Pediatrics (DBP) with new involvement of DBP faculty, APRN, and Fellow.

A retrospective chart review was conducted to examine the impact on identification of secondary diagnoses within the DS Clinic. A review of co-morbidities found in the clinic before (Time 1) and after (Time 2) the re-organization and involvement of DBP was conducted.

METHODS

Children with DS ages 2 to 17 years old, with a visit encounter between January 2018 to August 2019 were included.

Chi-square test and Fisher's exact t-test were utilized for comparison of secondary co-morbid neurodevelopmental diagnoses.

RESULTS

		Time 1		Time 2	
		N	%	N	%
Gender	Male	75	51.7%	126	56.0%
	Female	70	48.3%	99	44.0%
Ethnic Group	Hispanic	89	61.4%	136	60.4%
	Non-Hispanic	54	37.2%	88	39.1%
	Refused	1	0.7%	0	0.0%
	Other	1	0.7%	1	0.4%
Language	English	74	51.0%	131	58.2%
	Spanish	69	47.6%	92	40.9%
	Other	2	1.4%	2	0.9%

Incidence of Diagnostic Category

Diagnosis		Time 1		Time 2		P-value
		N	%	N	%	
Non-specific Developmental/ Behavioral Diagnoses	Not Present	98	67.6%	90	40.0%	<0.0001
	Present	47	32.4%	135	60.0%	
Intellectual Disability	Not Present	145	100.0%	196	87.1%	<0.0001
	Present	0	0.0%	29	12.9%	
Global Developmental Delay	Not Present	142	97.9%	214	95.1%	0.1629
	Present	3	2.1%	11	4.9%	
Language Disorder	Not Present	145	100.0%	144	64.0%	<0.0001
	Present	0	0.0%	81	36.0%	
ASD	Not Present	140	96.6%	216	96.0%	0.7860
	Present	5	3.4%	9	4.0%	
ADHD	Not Present	143	98.6%	221	98.2%	>0.9999
	Present	2	1.4%	4	1.8%	
Stereotypy	Not Present	145	100.0%	221	98.2%	0.1583
	Present	0	0.0%	4	1.8%	
Other Diagnosis	Not Present	143	98.6%	214	95.1%	0.0735
	Present	2	1.4%	11	4.9%	

CONCLUSIONS

The DS pediatric population has a range of co-morbid neurodevelopmental disorders including developmental and behavioral concerns, intellectual disability, language delay, ASD, and ADHD.

The re-organization with the entry and expansion of DBP into the DS clinic positively correlated with detection of co-morbid conditions.

Developmental/behavioral assessment is integral to avoid overshadowing of co-morbid conditions in DS.

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