Pediatric Bipolar disorder, in Malta is it under-diagnosed?

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Key Words

Pediatric, Bipolar disorder, Under-diagnosed, Malta

Abstract

The objective of this retrospective study was to determine the frequency of Bipolar Disorder in children and adolescents referred to the Child Guidance Clinic (CGC), St. Luke's Hospital, Malta, over a year. Diagnostic criteria were analyzed and compared to current literature.

Of 141 children, none were diagnosed with Bipolar Disorder. Further awareness of clinicians is advised, to identify Bipolar Disorder, thus limiting its long term morbidity and mortality.

Introduction

Pediatric bipolar disorder (BD) is a disorder of affective regulation; it is a serious mental illness with significant morbidity and mortality. BD is a chronic relapsing remitting mental disorder, which has a profound impact on morbidity and mortality.[1] BD is ranked 7th of the world-wide causes of non-fatal disease burden.[2]

Most studies indicate that the onset of BD is frequently between ages 15-30 years. Recently it has been reported that BD starts before the age of 10, though this is rare, it does occur.[3] The prevalence of BD is estimated at 0.1 to 2% among adolescents.[4] The rate of bipolar affective disorder 1 (episodes of mania and depression) and bipolar affective disorder 2 (episodes of hypomania and depression), in adolescents is around 0.99% whereas using the wider BD spectrum classification (and BD NOS), studies report prevalence rates of up to 3%.[5]

Bipolar symptoms in young children mimic those in adulthood but with minor differences.[6] These children most commonly present with symptoms such as irritability, depression, impulsivity, out-of-control behavior, delinquent behavior, inappropriately happy mood, constantly on the move, lack of judgment and inflated self-esteem, delusions of grandeur, rapid and pressured speech, flight of ideas, suicidal ideation and behavior.[7] The symptoms that were more prevalent in preschool children include irritability / dyscontrol, temper tantrums, poor frustration tolerance, impulsivity, increased aggression, decreased attention span, and hyperactivity.[8] Symptoms similar to adult presentations of depression, mania and psychosis were more prevalent in children with a bipolar diagnosis at a later age (7-12 years).[8] Patients with childhood-onset bipolar disorder (before 12 years of age) were more frequently males and had a more frequent co-morbidity with attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) when compared to adolescent-onset bipolar disorder.[9] Patients with BD-NOS had an earlier age at onset and had frequent co-morbidities such as ADHD and ODD. These follow a chronic rather than an episodic course.[10]

Longitudinal studies suggest that pre-pubertal BD may be more difficult to treat than later onset BD.[11]

Evidence suggests BD is often co-morbid to ADHD, conduct disorder, ODD, anxiety disorders, including obsessive-compulsive disorder and generalized anxiety disorders, substance and alcohol abuse and personality disorders.[11,12]

Effective pharmacotherapy and management are critical in order to minimize relapses and long term disability, morbidity and mortality.[12] Delays in initiation of mood stabilizers, confers an elevated risk for suicidal behavior, poor social adjustment and more hospitalizations. Greater surveillance screening for bipolar illness may help to diminish these adverse outcomes.[4]

The objective of this study was to determine the frequency of BD in children and adolescents referred to the Child Guidance Clinic (CGC) St Luke's Hospital Malta, over a period of a year. The frequency of bipolar affective disorder locally was compared to that reported in the literature. Diagnostic criteria used in Malta, were also compared to those used in other centers abroad.

Method

This retrospective study included all children referred to the Child Guidance Clinic (CGC) at St. Luke's Hospital Malta, over a year from January to December 2007. Inclusion criteria were: first visit to CGC, and patient ages from 8 to16 years (both ages included). Exclusion criteria were a working diagnosis of autism spectrum disorders or mental retardation. Children attending Child Guidance Clinics in Gozo were not included in the study. Children reviewed in the private sector were not included in this study as data was not readily available, although the authors did speak to the relevant consultant psychiatrists and confirmed that no diagnosis of BD was made. The authors are also confident that if a diagnosis of BD 1 was made then admission to hospital for management of the patient would have been required and therefore he would have been referred through the public service route and then picked up as one of the cases at CGC.

Approval to carry out the study was obtained from the head of psychiatry at Mount Carmel Hospital. This study was also registered and approved by the merit award scheme. Data was collected

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restrospectively through the case notes and recorded in an anonymous way, the information collected did not influence the management outcome the young person received at CGC.

Data collection was carried out six months after the end of the study period that was, May to June 2008. Case notes were reviewed, and the working diagnosis made by the multidisciplinary team at the CGC, in accordance to the multi-axial system used for children and adolescents, in the International classification of mental and behavioral disorders (WHO 1994), was recorded. This classification is divided in six axes describing: psychiatric disorder, delays in psychological development, intellectual level, medical conditions, psychosocial adversity and adaptive functioning. The most recently allocated working diagnosis was the one we recorded. Special note was taken to pick up any reference or formal diagnosis of BD in the case notes. Also response to treatment was recorded in accordance with the last entry in the file when reviewed by a member of the multidisciplinary team. Treatment resistance by the children and adolescence was recorded.

Data was inputted in Microsoft Excel 2007 and descriptive percentages were tabulated.

Results

Of the 146 case files reviewed, 141 (96.6%) children met the inclusion criteria. The sample consisted of 84 males (60%) and 57 females (40%) with a mean age of 10.9 (±2.2).

The distribution by diagnosis of the 141 children referred to CGC is: 46 (32.6%) were diagnosed with hyperkinetic disorder, 19 cases (13.5%) with adjustment disorder, 18 (12.8%) with conduct disorder, 13 (9.2%) with anxiety disorders and 11 (7.8%) with obsessive-compulsive disorder. Refer to Table 1 for further details on ICD-10 diagnosis of sample. No diagnosis (0%) of BD was made for the 141 children included in the study.

75 (53.2%) of the cohort were reviewed only once by the CGC multidisciplinary team; a working diagnosis and management plan was made but there was no-follow up during the study period and thus outcome could not be clearly established.[12] (8.5%) of all referred patients did not require follow-up and were discharged by the firm consultant due to behavioral presentation being in-keeping with a normal child development and/or the severity of the disorder not meeting criteria for specialist service and/or discharged at requested by the legal guardian.

54 (38.3%) children had attended follow-ups. 36 (66.7%) of these children improved with the management plan given. Best responders were those diagnosed with generalized anxiety disorder, depressive disorder, somatoform disorders, and other behavioral and emotional disorders. 18 (33.3%) children did not respond to the treatment plan, these included youngsters with eating disorders, tic disorders and obsessive-compulsive disorders. From our results, it was noticed that those children diagnosed with ADHD (hyperkinetic disorder)

Table 1: All the children referred to Child Guidance Clinic during 2007. The working diagnosis and their outcome are outlined

Diagnosis	Discharged	Improved	One Review	Not improved	Grand Total
Hyperkinetic disorder	4	10	25	7	46
Adjustment disorder	2	4	10	3	19
Conduct disorder	0	4	13	1	18
Anxiety disorder	0	4	8	1	13
OCD	0	2	7	2	11
Depressive disorder	0	3	2	0	5
Emotional disorders	2	2	0	1	5
Somatoform Disorder	1	2	1	0	4
Eating disorder	0	0	1	2	3
Speech and language disorder	0	0	3	0	3
Tic disorder	1	1	0	1	3
Mixed disorder conduct & emotion	0	0	2	0	2
Other behavioural and emotional disorders	0	2	0	0	2
Phobia	0	0	2	0	2
Drug abuse	1	0	0	0	1
Schizotypal disorder	0	0	1	0	1
Sexual maturation disorder	1	0	0	0	1
Social functioning disorders	0	1	0	0	1
Substance abuse	0	1	0	0	1
Total	**12**	**36**	**75**	**18**	**141**

Table 2: Illustration of the distribution of children, their diagnosis, and the percentage improvement over 2007

Diagnosis	Improved		No improvement		
	N=	(%)	N=	(%)	
Hyperkinetic disorder	10	(58.8)	7	(41.2)	100%
Conduct disorder	4	(80.0)	1	(20.0)	100%
Adjustment disorders	4	(57.1)	3	(42.9)	100%
Anxiety disorder	4	(80.0.)	1	(20.0)	100%
OCD	2	(50.0)	2	(50.0)	100%
Other behavioral and emotional disorders	2	(100.0)	0	-	100%
Depressive disorder	3	(100.0)	0	-	100%
Social functioning disorders	1	(100.0)	0	-	100%
Somatoform disorders	2	(100.0)	0	-	100%
Emotional disorder	2	(66.7)	1	(33.3)	100%
Tic disorder	1	(50.0)	1	(50.0)	100%
Substance abuse	1	(100.0)	0	-	100%
Eating disorders	0	-	2	(100.0)	100%
Total	**36**	**(66.7)**	**18**	**(33.3)**	**100%**

did fairly well, as 58.8% responded to the treatment given at CGC. Table 2 illustrates the above.

Limitations

The results may be limited by the following, (a) use of retrospective design; (b) small sample size i.e. over half of the cohort were reviewed only once at CGC, during the study period, thus improvement could not be really assessed; (c) ages of the children considered were 8-16 years; (d) children followed up by psychiatrists in the community could not be included; (e) children followed up at CGC in Gozo were not included. The authors did ask consultant psychiatrists working with children, whether they had reviewed anyone with BD in Gozo over that year, however their reply was negative. The authors are convinced that due to the nature of severity of disorder any child diagnosed with BD 1 would require hospital in-patient treatment and would have come to the attention of the national health service.

Discussion

In comparison, the frequency of children and adolescents diagnosed with BD in Malta is significantly lower than that reported in the literature. Reasons for this could be lack of specific awareness in recognizing and diagnosing pediatric bipolar disorder locally, or due to the diagnostic criteria used. In Child Guidance Clinic, the multi-axial version of ICD-10, is used rather than the DSM IV criteria, which is more quoted in studies. [4,13,14] In the DSM IV diagnosis of BD can be assigned after one manic episode alone, while in ICD-10 the diagnosis is only assigned after the presentation of the second affective episode, one of which is a mixed or manic episode. Thus this could lead to a relative delayed diagnosis of BD.

Standardized diagnostic assessment tools include: (a) WASH-U-KSADS (semi-structured interview that yields a DSM-IV diagnosis). The WASH-U-KSADS has a provision for documenting the onset and offset of rapid mood swings. Inter rater reliability was 100% reported. (b) Child Mania Rating Scale Parent Version (CMRS-P) completed by parents, and the Young Mania Rating Scale (YMRS) completed by the clinician. The scale measures manic symptoms only[14]. (c) (KSADS-MRS) which is a semi-structured interview, completed by the clinician after interview with the parents and youths sequentially. (d) The Mini International Neuropsychiatry Interview-Kid (MINI-KID) is a structured interview that elicits co-morbid diagnoses in children. This has been used to differentiate BPD from ADHD.[12]

Another finding from this study was that 18 (33.3%) children being treated the at Child Guidance Clinic did not improve on the treatment prescribed. 7 of these youngsters were cases diagnosed with ADHD. The use of a more specific diagnostic tool would help elucidate early clinical diagnosis of BD, thus excluding the possibility of mis-diagnosis. Studies indicate that children with BD alone or with other co-morbid illnesses are amongst the poorest responders to treatment.[15] Research shows that early and the correct psychopharmacology is critical to minimize the risk of morbidity and mortality associated with BD. This mental disorder carries a high risk of substance misuse and risk of suicide hence is a public health concern.[4,16]

The rapid increase in frequency reported for pediatric BD highlights a need for further longitudinal studies following up this cohort of non-responders so as to identify reliable clinical and epidemiological data of BD[17] in clinical practice in Malta.

For the list of abbreviations & references log on www.thesynapse.net