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Bipolar disorder in children and young people on the autism spectrum

We are members of a multidisciplinary tertiary second opinion referral service for youth (under age 18 years) with suspected mood disorders in the North East of England called the Adolescent Bipolar Service (ABS). ABS is in a unique position as it is co-located with the Complex Neurodevelopmental Disorder Service (CNDS) at Walkergate Park in Newcastle.

CNDS is a nationally commissioned second opinion service for children and young people with neurodevelopmental disorders. Some of the ABS team members work across both services, and have the expertise to input into complex cases with diagnoses of both bipolar disorder (BD) and autism spectrum disorder (ASD). It is important to note that the experience of ABS and CNDS (second opinion services) may not always reflect that of colleagues in community Tier 3 Child and Adolescents Mental Health Services (CAMHS).

Since the inception of ABS in 2009, we have noticed that a significant proportion of young people diagnosed with BD also have features suggestive of ASD. While this is infrequent it is an important association to make for reasons we will now describe.

Diagnostic features

[Given the nature of this article, we will not repeat the diagnostic criteria for ASD in DSM-5 (American Psychiatric Association 2013) as our readers will probably be familiar with this.]

Diagnostic features of BD:

- A mood disorder characterised by episodes of hypomania/ mania (elevated mood), depression and mixed episodes.
- May have its onset in childhood but onset in childhood is classically considered rare (Carlson and Glovinsky 2009).

- The rates of diagnosis of BD in youth under age 18 years (defined as paediatric bipolar disorder for this article aka PBD) have risen exponentially in recent years (Blader and Carlson 2007; Moreno et al. 2007).

It is not entirely clear whether these increased rates of diagnoses of PBD are down to better identification at early stages of the disorder and/or due to changing incidence. A recent meta-analysis reported that the prevalence of PBD was about 1.8% (Van Meter et al. 2011). PBD is reported to be an important cause of psychosocial dysfunction as it impacts on youth at a crucial stage of development. It has been hypothesised that early recognition of PBD may be important as it may prompt early treatment which may improve the illness course, although this requires rigorous evaluation.

There is considerable international controversy regarding the validity of 'broadly defined' PBD (NICE 2014). Furthermore, there have been differences in the conceptualisation of PBD, with some viewing irritability rather than euphoria as the hallmark symptom of mania in children (Wozniak and Biederman 1997).

In contrast to the episodic nature of adult BD, some authorities maintain that PBD is characterised by non-episodic, chronic, ultra-rapid cycling, mixed irritable and manic states (Geller et al. 2008). However, a more conservative diagnostic approach is supported by the findings from longitudinal studies, which show that children with these characteristics do not go on to develop BD; rather, they are at increased risk of developing unipolar depression and anxiety disorders (Brotman et al. 2006; Stringaris et al. 2010).

Furthermore, irritability is a nonspecific symptom in childhood associated with a wide range of childhood diagnoses and has been reported as not predictive of later onset BD (Stringaris et al. 2010) and therefore should not be regarded as the core mood of bipolar disorder in this age group (NICE 2014).

Given the controversies regarding the definition of PBD, researchers have proposed narrow, intermediate and broad phenotypes[1] for PBD (Leibenluft et al. 2003). The narrow phenotype is defined as a symptom profile that meets the full DSM diagnostic criteria for:

- Hypomania or mania.
- Has the hallmark symptom of elevated mood.
- Meets the duration criterion.

In the UK, the diagnosis of PBD requires the young person to meet the threshold for the narrow phenotype bipolar disorder (NPBD). Within the ABS service, when we refer to PBD, we are using the NPBD phenotype.

[1] Phenotype is defined as the observable characteristics of an individual which result from the interaction between the genes and the environment, that is, what traits you see in an individual.

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Why know about the association between ASD and bipolar disorder?

It is important to know about the possibility of dual diagnosis of ASD and BD. Research has shown that over half of youth with BD have significant ASD traits (Towbin et al. 2005). In a recent systematic review, the weighted mean prevalence rate in subjects with PBD arising from pervasive developmental disorders was 19% (Frias et al. 2015). Those with ASD have been found to have elevated rates of BD (DeLong and Dwyer 1988; DeLong et al. 2002).

ASD is associated with social interaction and communication deficits including communicating ones mood. BD is a disorder of mood, and therefore frequently relies on self-reporting, which may be hard for subjects with ASD. This may result in clinicians missing a diagnosis of BD. Also, if an individual with ASD is diagnosed with BD, it is important to differentiate restricted expression of emotions as part of the ASD, otherwise higher than required use of psychotropic medication may result (Joshi et al. 2013).

Identifying both diagnoses also impacts on treatment. If an individual has ASD, then psychological therapies may need to be modified too. In the National Surveillance study of first time diagnosis of narrow phenotype paediatric bipolar I disorder in the British Isles, 52% of the confirmed cases had a co-morbid diagnosis (6/22 had ASD) (Sharma et al. 2011). This finding requires duplication.

Assessment

In our service we offer assessments for youth with significant mood lability in addition to other possible mental health and neurodevelopmental needs. Our assessment consists of:

- A multi-disciplinary team with psychiatry, nursing, psychology and occupational therapy input.
- Obtaining a detailed history from the young person and their parents or carers, and collateral history from other services involved in the young person's care, such as school, social work and the voluntary sector.
- Employing the structure of the Washington University in St. Louis version of the Kiddie Schedule for Affective Disorders and Schizophrenia (WASH U KSADS) (Geller et al. 1996) which provides a framework for assessing the young person's mood.
- Encouraging young people and their families to complete mood charts.

Once the assessment is completed, a formulation is shared with the young person and family and treatment options discussed. Given the controversy around diagnosis of PBD in youth, we use the narrow phenotype for diagnosis, particularly as the diagnosis is more complex for ASD as highlighted above.

Treatment

Medication and psychological therapies are the mainstay of treatment. When considering medication this will depend on many factors including but not limited to the:

- Choice of the young person and parent
- Individual's current symptom profile (mania/ depression)
- Side-effect profile
- Previous response and family history of response.

Mood stabilisers and antipsychotics are used. As with any course of medication, weighing up the potential side-effects will help the young person and their family make an informed decision.

Pharmacological treatment on its own is never enough, and psychological therapies are extremely important though do require adaptation if both PBD and ASD are present.

Different psychological options include:

- Psychoeducation
- Relapse prevention work
- Cognitive behaviour therapy
- Family Focused Treatment for adolescents (FFT-A).

The research base for both medication and psychological treatments is not large. Dr Sharma is the principal investigator for the FAB Study - Family Focused Treatment for Adolescents with Bipolar Disorder. This is currently ongoing and is looking at whether the FFT-A UK version is a good treatment for young people with PBD and their families, including those with ASD.

Referrals for children and families

We continue to support CAMHS if they require assessment and management advice around diagnosis and treatment of adolescent BD. We accept referrals from the whole UK, as well as regularly presenting at conferences to raise awareness of BD and ASD.

Useful resources

Bipolar UK. Bipolar in children and adolescents
http://www.nimh.nih.gov/health/publications/bipolar-disorder-in-children-and-adolescents/index.shtml

The Royal College of Psychiatrists. Mental health and growing up factsheet – bipolar affective disorder (manic depression). Information for parents, carers and anyone who works with young people.

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