CASE REPORT

A role for risperidone in the treatment of communication disorder and comorbid mental health problems?

Adam Moreton,¹ Shermin Imran²¹Health Education North West, Manchester, UK²Adult and Youth Specialised Services Directorate, Greater Manchester West NHS Mental Health Foundation Trust, Manchester, UK**Correspondence to**Dr Adam Moreton,
a.moreton@doctors.org.uk

Accepted 31 October 2015

SUMMARY

This case report describes the co-occurrence of a psychiatric disorder with a specific communication disorder in a teenage girl who presented to youth mental health services in crisis, posing a significant risk of harm to herself and others. Description of this case would be of interest to practitioners in youth mental health in relation to the assessment and treatment of young people with similar difficulties. We present the case of a 17-year-old girl previously admitted to an inpatient adolescent unit. Her diagnosis was reformulated 4 months into her second admission to include a specific communication disorder with both receptive and expressive difficulties, evident from her pragmatic use of language. She was started on risperidone in month eight; following this, a significant improvement was seen and the patient was discharged a month later. Prior to the start of risperidone, a referral had been made to low secure adolescent services for further assessment and advice on management, due to the patient's challenging presentation and poor engagement with treatment.

BACKGROUND

Some children and young adults may present with significant difficulties with social communication and pragmatic use of language without meeting diagnostic criteria for Autism.¹ Furthermore, association between early childhood speech and language difficulties, and psychiatric disorders in young adults, is also well documented.² Introduced in May 2013, the Diagnostic and Statistical Manual of Mental Disorders—Fifth Edition (DSM-5), contained a new diagnosis available to psychiatrists: Social (Pragmatic) Communication Disorder (SPCD).

Characterised by 'a persistent difficulty with verbal and non-verbal communication that cannot be explained by low cognitive ability, [SPCD] limits effective communication, social relationships, academic achievement, or occupational performance'.³ It was hoped that introduction of this diagnosis into DSM-5 would allow for more accurate recognition of those with verbal and non-verbal communication problems, reduce inconsistencies in treatment between localities, help those with SPCD get appropriate assistance, and remove them from "the shadows of a 'not otherwise specified' label"³—often attributed when someone lacks the repetitive and stereotyped behaviour element required to make a diagnosis of autistic spectrum disorder (ASD). It is stressed by the American

Psychiatric Association that prior to diagnosing SPCD, ASD must be ruled out.

CASE PRESENTATION

A teenaged girl came to the attention of child and adolescent mental health services (CAMHS) after describing thoughts and visions of wanting to hurt others, hearing voices and engaging in self-harm (cutting herself and punching walls). She had presented with periods of escalation in her distressed mood, social withdrawal and poor self-care, with increased thoughts of anger towards others, and self-harming thoughts and behaviour. This was in the context of having experienced rejection in her early childhood from her biological as well as from her step-father, followed by what appeared to be a heightened sensitivity to experiencing rejection from carers. Furthermore, she reported having experienced bullying and rejection from her peers. At this time, concerns were also raised regarding a decline in the girl's concentration, school attainment and self-care. Her community CAMHS consultant started quetiapine 25 mg twice-daily to manage her emotional distress in the context of mixed emotional and conduct problems.

This did not appear effective, with the girl becoming increasingly distressed, displaying persistent angry feelings and remaining preoccupied with thoughts of hurting specific peers at school. Emotional difficulties at the time appeared to be in the context of a problematic relational dynamic with peers, including her unrequited feelings and a sense of rejection from others. She appeared to have expressed her anger and distress by writing a detailed story about a young girl wanting to take revenge, describing how she planned to kill specific persons from school.

Approximately 3 months later, the girl was admitted as an emergency to an adolescent inpatient psychiatry unit after expressing an increase in her thoughts to hurt family members and two peers at school, and increased concerns about thoughts of harming herself.

During an admission lasting almost 3 months, the girl reported no significant benefit from quetiapine, complaining of over-sedation. The medication was changed to fluoxetine for low mood, social withdrawal and self-neglect along with self-harming thoughts, noted during the admission. Consistent improvement in her mood, functioning, aggressive thoughts and engagement was noted, with the cessation of hallucinatory experiences. This led to

CrossMark

To cite: Moreton A, Imran S. *BMJ Case Rep* 2015. Published online: [please include Day Month Year] doi:10.1136/bcr-2015-210951

discharge under community CAMHS, with plans for an alternative educational placement.

The girl was readmitted 1 month later following deterioration in her mental state. She had complained of hearing voices and had shared with her mother that she wanted to kill both her mother and her sibling, and described visions of burning the family house down. This admission was informal to begin with, followed by assessment under section 2 of the Mental Health Act (for an assessment order of up to 28 days in hospital) after approximately 2 months.

This assessment followed an assault on a male peer on the ward and refusal to remain as an informal patient. Section 2 would subsequently be converted to a section 3 (a treatment order of up to 6 months in hospital). Early in the admission, the patient had also required restraint using Prevention and Management of Violence and Aggression (PMVA) holds after pushing staff, shouting and presenting as hostile and aggressive.

Over the next 4 months gradual improvement was noted and the patient undertook leave home, this was suspended after an incident of physical aggression during leave, occurring when boundaries were imposed by her mother. Following this incident, the girl was difficult to engage, giving only monosyllabic responses and stating that she did not care about the consequences of her behaviour. Melatonin 2 mg at night was started to assist in rectifying her poor sleep pattern; the dose was increased to 4 mg due to continued difficulty in sleep initiation.

Further deterioration was noted over the following weeks in the girl's ability to manage interactions with others without feeling overly criticised, as well as an increase in suicidal thoughts and aggression towards others. She became more withdrawn, neglected her personal hygiene and became non-adherent with fluoxetine 20 mg. Her ability to engage in cognitive behavioural therapy for symptoms of low mood was noted to be very limited at the time. There were further incidences of aggression and self-harm (scratches to arm and wall punching), along with an expression of wanting to burn the unit down.

Six months into the admission, a referral to low secure adolescent mental health services was made due to a continuation of this challenging presentation and poor engagement with treatment. Assessment from the low secure unit noted the geographic distance between their site and the patient's family home and advised transfer to a psychiatric intensive care unit (PICU) closer to home. Owing to ongoing sleep disturbance, melatonin was changed to a trial of promethazine titrated up to 25 mg at night. Incidences of wall punching and verbal altercations continued.

Eight months into the admission, promethazine was discontinued due to limited response in treating insomnia and increased arousal, with risperidone 0.5 mg subsequently started. Over the next month, considerable improvement was seen in terms of expressions of harming herself and others, with a reduction in overall arousal levels and improvement in sleep. Plans to explore a PICU transfer were abandoned and the patient was discharged on fluoxetine 20 mg each morning and risperidone 0.5 mg at night.

- ▶ International Classification of Diseases 10th edition diagnoses at discharge;
- ▶ F92: Mixed disorder of emotions and conduct;
- ▶ F80: Specific Developmental Disorder of speech and language.

INVESTIGATIONS

Approximately 6 weeks into the second admission, a detailed developmental history was obtained from the patient's mother

and an Autism Diagnostic Observation Schedule (ADOS) assessment undertaken. The ADOS⁴ is a semistructured assessment of potential autism or other pervasive developmental disorders—no diagnosis of autism was attributed following this assessment.

The Wechsler Intelligence Scale for Children Fourth Edition⁵ (WISC IV) was undertaken to provide a profile of current cognitive functioning with regard to verbal, perceptual, memory and processing speed abilities. The Verbal tasks indicated how well the girl was able to understand verbal information, think and reason with words and express her thoughts in words. Her performance on these tasks was within the low average range in comparison to other young people of her age (percentile rank=19).

Perceptual Reasoning tasks assessed her skills in solving non-verbal problems, sometimes using eye-hand coordination and working quickly and efficiently with visual information. Her performance on these tasks was in the average range (percentile rank=55). Her performance on tasks of working memory, which involve attention, concentration, mental control and reasoning (as the foundation to developing good reading, comprehension and numeracy skills is strongly linked to educational attainment) was within the average range (percentile rank=27). Her speed of processing was also average, percentile rank=50.

Overall, this girl's scores varied from low-average to average range. Her lowest scores fell in the verbal scales. Full scale IQ score could not be interpreted as there was a significant difference in scores between subscales. Her educational attainment at the time, from school reports, was below that expected from her cognitive assessment.

Speech and language team (SALT) assessments noted that she received intensive therapy between the ages of 3 and 6 years due to unintelligible language at the age of 3 years. She was discharged at 10 years of age. These SALT assessments used a subtest from the Clinical Evaluation of Language Fundamentals UK third edition (CELF UK3),⁶ called *Concepts and Directions*, to assess her ability to follow instructions of various lengths and complexities. She scored just below the average range with a standard score of 6 (average range 7–13) and percentile rank of 9.

The British Picture Vocabulary Scale Second Edition (BPVS2)⁷ was used to gauge the range of words that the girl understood. She was required to listen to a given word and point to one picture from a choice of four to indicate understanding. She scored in the low-average range with standard score of 82 (average range 70–130) and percentile rank 12.

In another vocabulary test (Word Classes from CELF UK3), she was given lists of three to four words and was asked to indicate which two were related to each other, she scored in the low-average range with standard score of 7 (average range 7–13) and percentile rank of 16. In a picture naming task focusing on her expressive ability to retrieve words accurately from her mental dictionary, she also made errors, for example, 'waterrain-fall' for waterfall, 'fermominator' for thermometer.

The Formulated Sentences subtest of the CELF UK3 was used to assess the girl's ability to formally construct grammatical, meaningful sentences. She performed below the expected level for her age with a standard score of 3 (average range 7–13) and percentile rank of 1. In testing verbal comprehension, her responses were disjointed, incomplete and inadequate as explanations, however, the gist of what was said suggested she understood the meaning of the information presented to her.

The girl was able to describe that she did not struggle with individual sounds but, rather, with complex strings of sounds. Although she was able to repeat multisyllabic words and

sentences containing such words without difficulty, she was able to reflect with support that the problem was more likely to arise when she had to think what to say and give explanations. This appeared to overwhelm her capacity to formulate language expressively on all levels—semantically, phonologically, lexically and syntactically, as well as in conversation.

She was noted to have been able to label her own feelings and notice the physical sensations that she experienced. Furthermore, she was able to recognise emotions in others from narrative examples that required higher level thinking—for example, matching emotions such as feeling embarrassed, proud, ashamed or jealous, and their motivations—quite well, and she was also able to understand the idea of having mixed feelings about things.

With regard to the Theory of Mind and perspective-taking,⁸ the girl was given picture scenarios to look at, and asked to suggest what words might fill the characters' thought bubbles. She was able to make good suggestions with minimal prompts. By taking a little time to think, she was able to take a perspective that was not her own. She was given very short stories to consider, in which she was required to use some theory of mind. She appeared to be inconsistent in her responses and it seemed effortful to her to work out what a person would do based on what she or he knew. It was noted that, when tasks were modified to accommodate language processing issues, she performed better.

The SALT report surmised that the girl's receptive language skills were superior to her expressive language skills. Her expressive language difficulties were evident in conversation and she seemed aware of this. The report also pointed out that the effort required to process and formulate what she wanted to say was so burdensome that her fragile ability to produce individual words clearly disintegrated. This was supported by the observation that, when saying words in isolation, or repeating them back, she was able to articulate them correctly.

Assessments gave no indication that she was autistic, however, her significant language processing issues appeared to impact on her conversational and social behaviour and disrupted performance in traditional theory of mind tasks. When tasks were modified to accommodate language processing issues, better performance was noted.

SALT recommended specific support for the girl within her educational placement, from an educational psychologist, as well as enhanced support from teaching staff, to navigate complex relational issues. It was predicted that conversational and social confidence should improve with her language abilities over time.

DIFFERENTIAL DIAGNOSIS

This patient's presentation met the criteria for a diagnosis of *mixed disorder of emotions and conduct* and *social (pragmatic) communication disorder*. Disturbance of conduct and emotions was supported by her thoughts and acts to harm herself and her threats of wanting to harm others, and incidents of aggression.

The girl did not appear to have a learning disability that would explain her aggression or conduct difficulties. There was no history of fire-setting or significant acquisitive offending. In addition, an ADOS assessment did not attribute a diagnosis of autistic spectrum disorder, a pre-request to diagnosing Social (Pragmatic) Communication Disorder.

Psychometric and speech and language assessment gave no indication of autism, though it highlighted her struggles in managing complex interpersonal and social situations due to expressive, (some) receptive and pragmatic language difficulties, compared to the majority of her peers, in the absence of restricted and repetitive interests and behaviours.

TREATMENT

Risperidone was started at 0.5 mg in the evening, and did not require further up-titration to achieve a good result. The rationale for using risperidone was to improve agitation and sleep. Social (Pragmatic) Communication Disorder is a new diagnosis for which a treatment evidence base has not yet been established.

OUTCOME AND FOLLOW-UP

Postdischarge, individual psychological and family work was utilised to support the development of communication skills. Information was also shared with other relevant community agencies (including education) to facilitate the provision of appropriate support and expectations. She was discharged under care of local CAMHS with a multiagency care package including support from local children's social services.

Four months later, the girl had a brief crisis admission at an adolescent mental health unit overnight due to her increased distress and recurring thoughts of self-harm in the context of a chest infection. The deterioration in her mental state was considered to have been most likely secondary to her acute medical illness and settled after appropriate treatment on a medical ward, after which she recovered well. At the time of writing (8 months postdischarge), she remains engaged with education and is settled at home exploring suitable work placement. She remains under consistent care of her mother and grandmother, with no significant contact with her father or with her step-father.

DISCUSSION

To date, no case reports or studies have been published on the pharmacological treatment of specific communication difficulties presenting with emotional and behavioural problems. The diagnosis of Social (Pragmatic) Communication Disorder (SPCD) has been noted to 'lack well-validated and reliable assessment measures', along with overlapping features with other diagnoses (such as conduct disorder).⁹ As a result, questions exist over the utility of this diagnosis. However, this diagnosis was introduced in the latest edition of the DSM, and therefore treatment plans will need to be generated for those diagnosed with the disorder, and an evidence base will need to be assembled for it.

This case of an adolescent indicates difficulties in receptive, expressive and pragmatic use of language for communication in social situations in the absence of restricted and repetitive interests and behaviours required for meeting criteria for Autism. This patient showed a significant improvement in symptoms after start of risperidone with the treating team having been able to move from a referral to low secure services, to discharge home within a month.

After a combined 10 months as an inpatient across two admissions, during which quetiapine, fluoxetine, promethazine and melatonin were utilised, significant improvement was noted only following addition of risperidone to fluoxetine.

Learning points

- ▶ A specific communication disorder, for example, Social (Pragmatic) Communication Disorder, should be considered in young people with communication difficulties where these do not meet criteria for Autism.
- ▶ Risperidone could be considered in the treatment of emotional and behavioural problems manifesting from Social (Pragmatic) Communication Disorder. Risperidone's benefits may also have been achieved through improving symptoms of the comorbid mixed disorder of emotions and conduct.
- ▶ Information about Social Communication Disorder and impact on functioning should be shared with patients and carers. Liaison with educational providers should occur to adjust expectations from young persons with this condition, and to enable adequate support.

Acknowledgements AM and SI would like to acknowledge the work of Dr Pushpinder Sidhu, CT3 Psychiatry Trainee, Health Education North West; Lindsey Gagan, Speech and Language therapist, Alpha Hospital, Bury; and Dr Jade Ark, Clinical Psychologist, Alpha Hospital, Bury who were also involved in the care of the patient and whose clinical notes and assessments were used in the preparation of this report.

Contributors AM conceived the idea of this report, co-drafted the manuscript and gave final approval. SI co-drafted the manuscript and gave final approval.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Bishop DVM, Norbury CF. Exploring the borderlands of autistic disorder and specific language impairment: a study using standardised diagnostic instruments. *J Child Psychol Psychiatry* 2002;43:917–29.
- 2 Beitchman JH, Wilson B, Johnson CJ, et al. Fourteen-year follow-up of speech/language-impaired and control children: psychiatric outcome. *J Am Acad Child Adolesc Psychiatry* 2001;40:75–82.
- 3 American Psychiatric Association. *Social (Pragmatic) Communication Disorder*. American Psychiatric Association, 2013. <http://www.dsm5.org/Documents/Social%20Communication%20Disorder%20Fact%20Sheet.pdf> (accessed 20 Nov 2014).
- 4 Lord C, Rutter M, DiLavore P, et al. *Autism diagnostic observation schedule (ADOS) manual*. Los Angeles, CA: Western Psychological Services, 2001.
- 5 Wechsler D. *Wechsler Intelligence scale for children*. San Antonio, TX: Psychological Corporation, 2003.
- 6 Semel EM, Wiig EH, Secord WA. *CELF, Clinical evaluation of language fundamentals —3UK*. San Antonio, TX: Psychological Corporation, 1995.
- 7 Dunn LM, Dunn L, Whetton C, et al. *British Picture Vocabulary Scales II*. Windsor, England: NFER-Nelson, 1997.
- 8 Baron-Cohen S. Theory of mind and autism: a review. *Int Rev Ment Retard* 2000;23:169–84.
- 9 Norbury CF. Practitioner review: social (pragmatic) communication disorder conceptualization, evidence and clinical implications. *J Child Psychol Psychiatry* 2014;55:204–16.

Copyright 2015 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow