CASE REPORT

WHEN DISORDERED EATING AND DISORDERED THINKING HAPPEN TOGETHER IN A YOUNG PERSON? A CASE REPORT

MH Lai, Susan MK Tan***

***Department of Psychological Medicine, Faculty of Medicine & Health Sciences, University Malaysia Sarawak; **Department of Psychiatry, Faculty of Medicine, University Kebangsaan Malaysia.**

Abstract

Objective:* This case report highlights the complexity of eating disorder in schizophrenia and outlines the diagnostic dilemma and challenges associated with the treatment. *Methods:* We report a 13 years old female with early onset schizophrenia who developed anorexic symptoms and binge eating. Her eating disturbances worsened after olanzapine was commenced. *Results:* A combination of pharmacological and psychosocial intervention led to remission of schizophrenia co-morbid with eating disorder NOS. *Conclusion:* Co-morbid diagnosis of schizophrenia and eating disorder is not uncommon. Early diagnosis and evidence-based intervention are imperative as untreated illness greatly impacts the developmental trajectory of young people. Meeting family's needs improves family functioning which in turn improves patient's outcome. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 101-105.

Keywords: Schizophrenia, Eating Disorder, Comorbidity

Introduction

The coexistence of eating disorder in schizophrenia has been documented as early as in the days of Bleuler [1]. Over the past few decades, 25% to 36% of patients diagnosed to have eating disorder were also reported to have schizophrenia [2]. Lyketsos GC et al. (1985) observed that patients found to have schizophrenia fulfilled criteria for eating disorder more often than in the control group [3]. The comorbidity of schizophrenia and eating disorder represents the complexity of illness affecting brain function. The clinical implications are significant as the impact of inadequate nutrition on the course of the comorbid psychotic illness has effects on the efficacy of medication. Conversely patients' cognition during the state of poor health may also lead to refractory illness [4]. The co-morbidity of schizophrenia and eating disorder is still little understood and there is a dearth of research regarding this complex phenomenon [2,5].

Delay in recognizing illness and initiating treatment leads to definite negative consequences. But when the patient is still a young teenager with a rapidly developing brain, the impact is even more serious. Scientific evidence from longitudinal studies shows that both neuropathological and magnetic resonance imaging (MRI) findings indicate that neurodevelopment is ongoing throughout life, and that schizophrenia is due to aberrations in the neurodevelopmental processes [6].

Untreated illness has a serious negative impact on a young person's developmental trajectory, resulting in stunting of the bio-psycho-social growth. When a young person is too busy grappling with psychotic symptoms, causing neglect in the normal learning required to grow up, such as school and interpersonal relationship. Medication functions to reduce

these psychotic symptoms so the patient can be re-engaged in the real world and his neurons can focus on learning how to handle the realities of life. The process mediating these changes involves that of changing synaptic plasticity. This includes the cognitive, social and emotional learning required as he grows up to be an independent adult, able to function and handle the challenges of day to day living [7].

Caring for young people struggling with illness and growing up would inevitably affect the quality of life and emotional well being of their caregivers as well [8]. This is a case report on a Malaysian patient who had early onset schizophrenia with eating disorder not otherwise specified (NOS). The diagnostic dilemma, challenges in pharmacological and psychosocial interventions in this patient are addressed.

Case Report

A 13-years-old female student, an A student with perfectionist traits, presented with psychotic symptoms, namely delusion of reference, persecutory delusions, thought broadcasting and third person auditory hallucination of 6 months duration. These appeared to have been precipitated by her being accepted into a high ranking academic-oriented secondary school. She had difficulty in adapting to the new environment and classmates. She developed psychotic experiences. She was very disturbed by them. Her school performance deteriorated. She refused to go to school as she believed that her classmates and teacher had bad intention towards her. She also had depressive symptoms following that.

A diagnosis of schizophrenia was made based on DSM-IV-TR [9]. Risperidone was started but unfortunately the patient developed severe oculogyric crisis. Her medication was changed to olanzapine and titrated up to 10mg ON. Her psychotic and depressive symptoms improved, however, the oculogyric crisis still occurred occasionally.

A year prior to the onset of her psychotic illness she begun to become very concerned about her body weight and started dieting. From 44kg (BMI: 18.5 kg/m^2), her weight reduced by 7 kg over a year (BMI: 15.6 kg/m^2). There was no history of taking slimming pills. However to cope with the emotional distress when she experienced psychotic symptoms, she started to binge. She had a sense of lack of control over eating during the episodes. This worsened after she was prescribed olanzapine as she gained weight and became more preoccupied with her weight. She restricted herself to only eating 500 calories per day by skipping meals and drank only water. These starvation efforts could last for a whole week. She also induced vomiting after meals especially after binge eating. She had body image distortion and felt that she was fat when she was actually underweight. Her eating disorder symptoms worsened as the content of her delusion and auditory hallucination became food related. She heard voices asking her to binge, followed by voices laughing at her being fat and believed her binge eating was partly due to the control of an external force. However she still had her menses regularly. Her parents failed to recognize that she was developing an eating disorder as both parents were concerned about weight gain with antipsychotic treatment. Her mother even suggested to the patient to induce vomiting when she complained of feeling full and uncomfortable. The parents had difficulty in their anger management. They also had communication problem and lack of understanding that teenagers need privacy and respect. This is evidenced by her mother often reading the patient's diary secretly. The patient also had poor impulse control. When she did not achieve her own high expectations in her homework, she became irritable and aggressive towards her mother. However since she was diagnosed to have mental illness, the family was more loving and her parents were more patient with her.

Mental state examination on the first contact revealed that she had poor eye contact and only superficial rapport was achieved. She reported feeling fearful and sad but her affect was blunted. She also had poverty of speech, persecutory delusions and delusions of reference. Her judgment and insight were poor. Physical examination revealed an underweight adolescent with BMI of 16.8 kg/m^2 (weight: 41.3kg). Abrasions on her knuckles, which caused by self-induced vomiting (Russell's sign) were noted during her subsequent follow

up. Otherwise, her secondary sexual characteristics were fully developed and other systemic reviews were unremarkable. Blood investigations were within acceptable limits.

In view of the oculogyric crisis still persisted and her binge eating had increased in frequency after commencement of olanzapine, her antipsychotic was changed to quetiapine, which was titrated up to 400mg ON gradually without side effects. Therapeutic alliance was established with the patient and parents. Family dynamics were explored. The parents were gradually empowered to become co-therapists after being given psychoeducation regarding schizophrenia with comorbid eating disorder and trained on positive parenting skills and skills on adaptive anger management. Eating meals together as a family was encouraged. At the same time, patient was motivated to gain a healthy weight and to cultivate a healthy dietary habit to avoid complications which could potentially affect her future development and achievement. Healthy coping skills in dealing with her distressed emotion were discussed. Her residual delusions and automatic thoughts were dealt with through cognitive behavioral therapy. She achieved remission in her psychotic and eating disorder symptoms after a year of pharmacological and psycho-social treatment. Despite one and the half year of not schooling, she was enrolled in a course on digital animation in a local vocational college, in her pursuit of ambition to become an animator.

Discussion

Diagnostic dilemma emerges when a patient who is diagnosed to have schizophrenia presents with symptoms of eating disorder. Questions that arise are whether these symptoms are part of the schizophrenia spectrum or a different clinical entity. There are a few theories to explain the association of eating disorder symptoms and psychosis. Firstly, food refusal could be a response towards the underlying delusion of poisoning, persecution or hallucination related to eating [3]. Secondly, anorexic symptoms could be a phenotype of cognitive impairment, i.e. distorted perceptions of eating and body image in schizophrenia [10]. Thirdly, binge eating can be a defense against psychosis [11,12]. Eating disturbances in patients with schizophrenia appear to be a means of coping, i.e. to organize their life and give them a sense of identity when their ego boundaries are lost [13].

This patient was preoccupied with calories in food and other obsessions commonly seen in anorexia nervosa (AN) patients but rarely seen in those with schizophrenia [3]. Her quality of life was also impaired by her worsening of eating disorder symptoms despite the improvement in her psychosis. In addition, her eating disturbance was potentially becoming full-blown AN without early intervention, generating greater complications in an adolescent [14]. Therefore, a formal diagnosis of schizophrenia with comorbid eating disorder NOS according to the DSM-IV-TR were made, so that the patient and her family also address the impairment caused by the eating disorder.

Olanzapine was shown to have efficacy as a treatment of early onset schizophrenia [15]. It also has some benefits in terms of weight gain and improvement in obsessive symptoms in patients with eating disorders [16,17]. However, a study demonstrated that olanzapine caused more prevalent and severe extrapyramidal effects in youth than adults [18]. Moreover, studies demonstrated that olanzapine may induce recurrence or deterioration of binge eating in patients with prior eating disorders [19,20]. Therefore, her antipsychotic was changed to quetiapine as she had oculogyric crisis and worsening of binge eating with olanzapine. In addition, one small open-label study showed that quetiapine used in anorexia nervosa patients resulted in psychological and physical improvements with minimal side-effects [21].

Psychosocial interventions which involve the family are especially important in successful management of both schizophrenia and eating disorder in this 13-year-old. This is because a young adolescent is very dependent on her family to meet her needs. Thus, the caregivers' burden will be higher and early detection of unmet needs is necessary to prevent burn out [8]. Upon improvement of parenting skills and anger management of both parents, family functioning improved. This is known to be associated with better outcome in adolescents

with AN [22]. Cognitive behavioral therapy is also known to improve schizophrenia or eating disorder symptoms [23] as shown in this patient. A comprehensive, customized and evidence-based approach is essential in achieving better outcome in managing a comorbid diagnosis.

Conflict of Interest: None.

References

1. Bleuler E. Textbook of psychiatry.: Macmillan,; 1934;149.

2. Miotto P, Pollini B, Restaneo A, Favaretto G, Sisti D, Rocchi MB, et al. Symptoms of psychosis in anorexia and bulimia nervosa. Psychiatry research 2010;175(3):237-43.

3. Lyketsos GC, Paterakis P, Beis A, Lyketsos CG. Eating disorders in schizophrenia. The British Journal of Psychiatry 1985;146(3):255-61.

4. Blinder BJ. Eating disorders in psychiatric illness. Western Journal of Medicine 1991;155(5):519-20.

5. Yum SY, Hwang MY, Halmi KA. Eating disorders in schizophrenia. Psychiatric Times. 2006;23(7):1-6.

6. Andreasen NC. The lifetime trajectory of schizophrenia and the concept of neurodevelopment. Dialogues in clinical neuroscience 123 (2010): 409. 2010;12(3):409-15.

7. McGlashan TH. Schizophrenia in Translation: Is Active Psychosis Neurotoxic? Schizophrenia bulletin 2006;32(4):609-13.

8. Graap H, Bleich S, Herbst F, Scherzinger C, Trostmann Y, Wancata J, et al. The needs of carers: a comparison between eating disorders and schizophrenia. Social psychiatry and psychiatric epidemiology 2008;43(10):800-7.

9. DSM-IV-TR: American Psychiatric Association.; 2000; 153-154.

10. Yamashita Y, Takei N, Kawai M, Mori N. Anorexia nervosa as a phenotype of cognitive impairment in schizophrenia. The British Journal of Psychiatry 1999;174(6):558.

11. David AS, Farmer AE, Murray RM. Schizophrenia and bulimia: Case report. International Journal of Eating Disorders. 2006;5(4):771-5.

12. Hugo PJ, Lacey JH. Disordered eating: a defense against psychosis? International Journal of Eating Disorders 1998;24(3):329-33.

13. Ferguson JM, Damluji NF. Anorexia nervosa and schizophrenia. International Journal of Eating Disorders 1988;7(3):343-52.

14. Katzman DK. Medical complications in adolescents with anorexia nervosa: a review of the literature. International Journal of Eating Disorders 2005;37(S1):S52-S9.

15. Kryzhanovskaya L, Schulz C, McDougle CJ, Frazier JA, Shen J, Dittman R, et al. A double-blind, placebo-controlled study of olanzapine in adolescents with schizophrenia. Neuropsychopharmacology. 2005;30(S1):S258–S9.

16. Brambilla F, Garcia CS, Fassino S, Daga GA, Favaro A, Santonastaso P, et al. Olanzapine therapy in anorexia nervosa: psychobiological effects. International clinical psychopharmacology 2007;22(4):197-204.

17. Bissada H, Tasca G, Barber AM, Bradwejn J. Olanzapine in the treatment of low body weight and obsessive thinking in women with anorexia nervosa: a randomized, double-blind, placebo-controlled trial. American Journal of Psychiatry 2008;165(10):1281-8.

18. Sikich L, Hamer R, Bashford R, Sheitman B, Lieberman J. A pilot study of risperidone, olanzapine, and

haloperidol in psychotic youth: A double-blind, randomized, 8-week trial. . Neuropsychopharmacology. 2004;29:133-45.

19. Theisen FM, Linden A, König IR, Martin M, Remschmidt H, Hebebrand J. Spectrum of binge eating symptomatology in patients treated with clozapine and olanzapine. Journal of neural transmission 2003;110(1):111-21.

20. Gebhardt S, Haberhausen M, Krieg J-C, Remschmidt H, Heinzel-Gutenbrunner M, Hebebrand J, et al. Clozapine/olanzapine-induced recurrence or deterioration of binge eating-related eating disorders. Journal of neural transmission. 2007;114(8):1091-5.

21. Court A, Mulder C, Kerr M, Yuen HP, Boasman M, Goldstone S, et al. Investigating the effectiveness, safety and tolerability of quetiapine in the treatment of anorexia nervosa in young people: A pilot study. Journal of psychiatric research. 2010;44(15):1027-34.

22. North C, Gowers S, Byram V. Family functioning and life events in the outcome of adolescent anorexia nervosa. The British Journal of Psychiatry 1997;171(6):545-9.

23. Butler AC, Chapman JE, Forman EM, Beck AT. The empirical status of cognitive-behavioral therapy: a review of meta-analyses. Clinical psychology review 2006;26(1):17-31.

Corresponding author: ***Lai Mee Huong, Department of Psychological Medicine, Faculty of Medicine & Health Sciences, University Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia.***

Email: lmeehuong@hotmail.com

Received: 18 January 2013 Accepted: 5 August 2013