Three different presentations of bulimia nervosa

M Lam, S Lee

This case report describes the different presentations of three women with bulimia nervosa, all of whom demonstrated purging behaviour. Two of the patients also had hypokalaemia, whereas the third exhibited Russell's sign—that is, calluses on the dorsum of each hand. Drug treatment and psychosocial intervention improved the condition of all three patients. The report emphasises the need for both health care professionals and the public to recognise this potentially dangerous but treatable disorder.

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Introduction

Eating disorders such as anorexia nervosa and bulimia nervosa have become increasingly common modes of coping with distress among young women in high-income countries, as well as in urbanised regions of low-income countries, including China.[1] Bulimia nervosa is now significantly more common than anorexia nervosa in the West.[2] As a result of the publicity given to anorexia nervosa by the local media, this potentially lethal disorder has become better known among physicians as well as the public in Hong Kong. In contrast, bulimia nervosa remains unfamiliar to local doctors and other health professionals. We report on three patients with bulimia nervosa to illustrate the varied clinical presentation, aetiology, diagnosis, complications, and treatment of this intriguing condition.

Case reports

Case 1

A 22-year-old female university graduate was admitted to the Department of Medicine and Therapeutics at the Prince of Wales Hospital (PWH) in 1998, because of recurrent attacks of confusion, dizziness, and muscle cramping, which had lasted for 2 months. Serum chemistry studies revealed hypokalaemia (serum potassium level, 2.1 mmol/L [normal range, 3.5-5.0 mmol/L]) of uncertain origin. A mental status examination revealed that the patient was mildly depressed. She was underweight (body mass index [BMI] = 15 kg/m^2) and was preoccupied with weight control. She was haemodynamically stable, and secondary sexual characteristics were present. Her scores on the drive for thinness, bulimia, interoceptive awareness, and perfectionism subscales of the Eating Disorder Inventory (EDI) were significantly increased when compared with the normal scores of normal female undergraduates in Hong Kong.[3] She thus exhibited the specific as well as general psychopathologies of having an eating disorder. Upper gastro-intestinal endoscopy, electrocardiography and analysis of 24-hour urinary creatinine, protein, electrolyte, and catecholamine levels gave normal results. Psychosocial issues were investigated and discussed.

The patient had started dieting at the age of 18 years, after her body weight of 60 kg had been announced in class (BMI = 24.5 kg/m^2 [range among non-obese Chinese females, 19-24 kg/m^2]). Initially, she complained of belching and epigastric bloating after meals. Her weight decreased to 40 kg (BMI = 15.5 kg/m^2) over the next 4 years and she weighed herself six times before and after meals. Despite becoming underweight, she continued to perceive herself as being too fat. She maintained her body weight below a threshold of 46 kg by avoiding high-energy food, skipping meals, and restricting the quantity of food consumed. She had tried using dieting tea and slimming pills on a few occasions, but she had not used diuretics, thyroid hormone supplements, or laxatives; menstruation remained regular.

During the 18 months preceding psychiatric referral, the patient's body weight dropped further. She had up to 10 episodes per day of overeating, during which a large quantity of food was consumed alone either at restaurants or while hiding in the bedroom. The spells

Department of Psychiatry, The Chinese University of Hong Kong, Prince of Wales Hospital, Shatin, Hong Kong
M Lam, MB, BS, BSc
S Lee, MB, BS, FRCPsych

Correspondence to: Dr S Lee

of uncontrollable overeating were preceded by feelings of severe tension associated with unsatisfactory academic results and negative comments given by family and boyfriend. There followed intense shame, profound guilt, and self-induced vomiting. Family meal times were tense and quiet; she felt that her father was emotionally detached and her mother controlling. She also considered both her mother (BMI = 26 kg/m^2) and elder sister (BMI = 23 kg/m^2) to be fat. According to the patient, her mother regarded her as rebellious and impulsive in contrast to her obedient sister, and weight-controlling behaviour became an alternative way of achieving self-worth.

As treatment, the patient was given potassium supplementation and fluoxetine hydrochloride 60 mg/d. She was encouraged to normalise her mealtime frequency to three times daily so as to reduce the bulimic and purging episodes. Stress management skills that aimed to improve coping strategies were also taught. The patient's body weight increased to 41 kg. The vomiting episodes persisted at two to three times daily and were often precipitated by ongoing relationship problems with her 40-year-old boyfriend. The serum potassium level ranged between 2.1 and 3.9 mmol/L during hospital stay. Her family members were able to gain a better understanding of her eating disorder. Her concern about weight and shape subsided to a mild degree, but the bulimia persisted.

Case 2

A 22-year-old female graduate journalist was admitted to the Department of Medicine and Therapeutics at the PWH in 1998 for recurrent attacks of sudden loss of consciousness. These episodes were caused by diuretic and laxative abuse, which resulted in hypokalaemia (serum potassium level, 2.7 mmol/L) and hypotension (blood pressure, 90/50 mm Hg). Potassium supplementation and intravenous fluid were given to correct dehydration on both occasions.

The patient had a 7-year history of erratic eating behaviour and fluctuation in body weight (42-62 kg), which had started when she was preparing for her Form 3 school examinations. Her body weight had dropped from 50 kg to 42 kg in a few months (BMI = 20 kg/m^2 and 16.8 kg/m^2, respectively). Initially, she skipped meals to study, but soon found that eating less improved her concentration. At the same time, she became increasingly concerned with body shape and weight control. According to the patient, slimness signified self-worth and self-control. She employed various weight-losing strategies such as dietary restraint, walking up and down 30 floors two or three times a day, and walking instead of taking public transport. She also abused purgatives and diuretics without being aware of the ensuing medical complications. Three years later, the patient started to experience bouts of uncontrollable overeating up to four times a day. During these spells, which eventually replaced daily meals, she consumed a large amount of food over a short period of time and experienced significant guilt afterwards. She spat out most of the food, as she was fearful that anything that entered her food pipe would be converted to fat. She isolated herself to avoid her secretive behaviour from being discovered.

The patient was raised in a traditional family that treasured boys more than girls. Having an elder sister and a younger brother, she felt unwanted since birth, as the family had expected to have a boy. She was never the favourite child, despite having the best academic performance among the three siblings. During her childhood, her mother had used starving as punishment for misbehaving, and food as a reward for proper behaviour. She considered both her mother (BMI = 24.4 kg/m^2) and elder sister (BMI = 22.8 kg/m^2) to be plump, and her eating problem was never openly discussed at home.

A mental status examination given at the time of hospital admission showed the patient to be quiet and mildly depressed. She was otherwise healthy and of average shape (BMI = 19 kg/m^2). She perceived her weight to be much higher than she wished, and desired a slimmer face and thinner legs. Her EDI profile was strongly indicative of maturity fears, ineffectiveness, dissatisfaction, a drive for thinness, and bulimia.[3] She received cognitive behaviour therapy that aimed to correct cognitive distortions pertaining to body-shape control and to break the vicious cycle of binge eating. The use of purgatives was discouraged and adaptive coping strategies were suggested. She was guided to express her feelings to her family members more directly, and encouraged to cast aside her past and to focus on the present instead. She began to swallow solid food for the first time in 5 years. Bulimia persisted despite the administration of fluoxetine hydrochloride 60 mg/d.

Case 3

An 18-year-old female music student was referred to the PWH from the Department of Health in 1998 for significant weight loss of 13 kg and amenorrhea. The patient presented with a 2-year history of erratic eating behaviour and unstable body weight, which fluctuated between 41 kg and 58 kg (BMI = 13.4 kg/m^2 and 19 kg/m^2, respectively).

The patient had been brought up to be health-conscious. Having listened to her mother, who worked as a beautician and who was very concerned about eating well to maintain fitness, she had learned about the nutritious value and energy content of various foods at an early age. She had started dieting at school in Form 5, when she was deciding whether to pursue dancing as a career or, as preferred by her parents, to go to university. She skipped meals to save time for both study and dance, but eating less and controlling weight soon gave her a sense of self-control and self-worth, especially on-stage at dance school. The various weight-losing strategies she used included restricting her daily intake to 700 calories (2.94 kJ) and exercising vigorously each day by doing sit-ups, jogging, dancing, and walking up 18 floors. Menstruation stopped when her body weight decreased to 45 kg, but she viewed this as a relief rather than a burden.

She enjoyed stage life but also realised that dancing as a career could never fulfil her parents' wish for her to make a financial contribution to the family. She came from a religious and disciplinary family and her father was a church minister. She was the middle of three siblings, having an elder brother and a younger brother, whom she had to take care of when her mother was at work. She became increasingly isolated and stopped sharing meals with the family. Instead, her daily meals were replaced by several daily binges of high-energy foods such as crisps and sweets. These bouts of overeating were accompanied by vomiting episodes that were induced by inserting her fingers into her throat. Eighteen months after the onset of her erratic eating pattern, she was caught stealing food at a supermarket. Her family subsequently learned of her eating disorder. She felt that she deserved punishment for her chaotic eating behaviour and even comtemplated committing suicide.

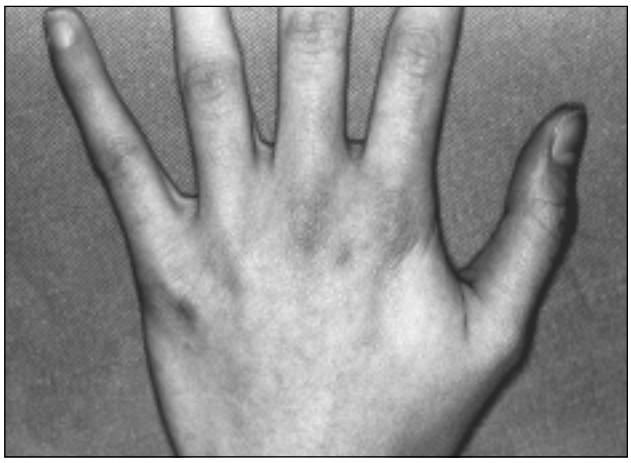

Fig. Russell's sign showing small calluses on the dorsum of the left hand of the patient in case 3

At the time of hospital admission, a mental status examination showed the patient to be quiet and mildly depressed. She was very worried about the legal consequences of the theft. Russell's sign—that is, calluses due to repeated rubbing of the skin against the upper incisors during self-induced vomiting—was visible on the dorsa of both hands (Fig).[4] She was otherwise physically healthy (BMI = 18 kg/m^2) and had menstruated recently. Her scores on the EDI subscales for a drive for thinness, bulimia, body dissatisfaction, and ineffectiveness were all high.[3] She received both individual and family therapy sessions, and her condition showed modest improvement. Four weeks after the shoplifting incident, the patient reported marked improvement in her eating pattern, with binges occurring only once a week. Her family was able to gain a better understanding of her eating problem. Their communication improved substantially and she began to sit at the table with her family at meal times.

Discussion

The three patients in this case report exemplified some of the different presentations as well as the following core features of bulimia nervosa: overconcern with shape and weight, irresistible urge to overeat, recurrent bulimic episodes during which a large amount of food is consumed in a short period of time, and subsequent self-induced vomiting or other purging behaviours. All three patients fulfilled the diagnostic criteria of bulimia nervosa that are listed in the international (ICD-10) and American (DSM-IV) systems of psychiatric classification.[5,6]

A varying proportion of bulimic patients have a previous history of transient anorexia nervosa, as illustrated in case 3; their bulimia may represent "a starved body rebelling and demanding to be fed."[4] In contrast to patients with the bulimic subtype of anorexia nervosa, patients with bulimia nervosa have a normal weight or are only slightly underweight, and they generally menstruate regularly. In Hong Kong in particular, their chaotic eating behaviour is typically a carefully guarded secret, unknown to their friends and family members. Even the patients themselves usually do not realise that bulimia is treatable and thus present late. Furthermore, doctors may only suspect the condition when dangerous physical complications of unclear origin occur. In fact, bulimia should now be considered a differential diagnosis for unexplained hypokalaemia among young women. The disorder can lead to a variety of other physical complications such as tetany, convulsion, impaired renal

function, and chronically swollen parotid glands.[2,4] We have recently encountered a case of severe faecal peritonitis secondary to excessive use of purgatives, which required treatment in the intensive care unit (unpublished data, 1999). Psychiatric presentations and associations of bulimia nervosa include suicide attempt, substance abuse, depression, morbid jogging, sexual abuse, and post-traumatic stress disorder. Social complications may also arise, as in the case of stealing in case 3. Such complications may lead to grave legal consequences as well as depression and suicidal risk.[7]

Why is bulimia becoming more common in Hong Kong? A hegemonic beauty industry and the social pressure on women to conform to unrealistic standards of thinness contribute to its surge, fat concern is usually not the sole cause, and certainly not the most fundamental, in the clinical context. The three cases described in this report emphasise the salience of a particular loss of control over life, social disconnection, and conflicting female roles in a contemporary society, especially women's traditional roles versus the modern demand of career accomplishment.[8] In vulnerable young women, these social factors breed eating disorder by generating low self-esteem, poor body acceptance, a constant need to be slim, ambivalence towards career achievement, and a morbid fear of negative evaluation.[9]

Although definitive local epidemiological data are lacking, bulimia nervosa is unambiguously increasing in the clinical context. From 1984 to 1990, only two such patients were seen at the Department of Psychiatry of the PWH. However, a total of 28 patients were treated from 1991 to 1998 (unpublished data, 1998). They were exclusively young women. Self-induced vomiting is also becoming more common among patients with bulimia.[10] In line with trends witnessed in western countries, bulimia is likely to become an increasingly 'fashionable' mode of coping with distress among young Chinese women in the coming decade. Given the many faces and clandestine nature of this potentially dangerous but treatable disorder, alertness among both health professionals and the public is warranted.

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