Variant of anorexia nervosa in Sri Lanka: a case series

A Rodrigo[1], U Hewawitharana[2]

Ceylon Medical Journal 2017; **62:** 104-107

DOI: http://doi.org/10.4038/cmj.v62i2.8476

Introduction

Anorexia nervosa (AN) is an eating disorder characterised by abnormally low body weight at least 15% below the expected for the height or Body Mass Index (BMI) less than 17.5kg/m^2, disturbed body image, intense fear of gaining weight or becoming fat, amenorrhea in women, loss of sexual interest and potency in men. In AN, low weight is achieved by intentional dieting, often accompanied by compulsive exercise, purging behaviour, use of appetite suppressants and or diuretics. Diagnostic and Statistical Manual (DSM 5) removed the diagnostic criteria of amenorrhea and some authorities have proposed a flexible approach with other diagnostic criterion too [1,2]. Patients with and without amenorrhea have different demographic and clinical characteristics [2]. Likewise, the absence of intense fear of gaining weight or becoming fat has been described in individuals, particularly in non-Western populations, who otherwise meet all criteria of AN [3,4]. Some do not consider intense fear of gaining weight or becoming fat as an essential criterion for diagnosis of AN because of the cultural variation in reasons for food refusal. However, others believe that intense fear of gaining weight or becoming fat is an integral part of AN and therefore an essential criterion [5]. The phenomenology of nonfat phobic anorexia nervosa (NFP-AN) remains the same over time and during the course of treatment which indicates that it is not a feature seen only during early stages or during remission of AN, but a separate subtype of AN. [6,7]

Patients with NFP-AN often report other reasons besides shape or weight concern for their history of food restriction and weight loss such as gastrointestinal difficulties or loss of appetite [5,8]. Most of reports of NFP-AN are from non-Western countries such as Hong Kong, China, Singapore, Malaysia, India and Ghana, but has been reported in Western countries too [4]. Some authors have reported that in Asian countries, NFP-AN is more common than classic AN [7].

Medical complications resulting from semi starvation affect virtually every organ system. Early identification and treatment of AN results in better outcome [9]. NFP-AN is more likely to be undiagnosed or underdiagnosed due to atypical presentation and lack of awareness among health professionals [4,10]. We report five cases of NFP-AN in Sri Lanka which were diagnosed late due to their atypical presentations. Written informed consent was obtained from all patients.

Case series

Case 1

Miss A, a 19 year old student of a private university presented with fullness of stomach and belching after meals which started a few months before the GCE Advanced Level examination. To avoid discomfort, she had small meals and she lost 7 kg (14.2% of total body weight) over fifteen months. She developed amenorrhea six months after the symptoms. There was no history of binge-eating, self-induced vomiting, abuse of slimming medications, excessive exercise, diarrhoea, constipation, vomiting or abdominal pain.

Mental state examination (MSE) showed that she was anxious about the exam and her physical symptoms. She was aware that she was thin and wanted to gain weight yet failed to appreciate the gravity of the situation. However, she believed a normal portion of food to be excessive and insisted that smaller portions are adequate. She had no depressive or psychotic features. Miss A had obsessional and dependent personality traits. Her weight was 42 kg and the body mass index (BMI) was15.6 kg/m^2. She had general wasting of muscles with marked thinning of hair. Her blood pressure was 110/65 mmHg and pulse rate was 64 beats per minute.

Miss A was referred by a physician to whom she had presented with abdominal symptoms. She has consulted several doctors and undergone numerous investigations. Routine blood investigations, upper gastrointestinal endoscopy (UGIE), colonoscopy and ultrasound scan (USS) of the abdomen were normal.

[1]*Faculty of Medicine, University of Kelaniya and* [2]*Colombo North Teaching Hospital, Sri Lanka.*

Correspondence: AR, *e-mail: <asirir2000@yahoo.com>.* *Received 11 March 2016 and revised version accepted 25 May 2017.*

She had been treated with several selective serotonin reuptake inhibitors (SSRIs) for anxiety, but had developed side effects.

A diagnosis of non-fat phobic AN was made and she was educated about her condition. She was managed using relaxation techniques, changing the focus from abdominal symptoms, small yet frequent meals, involvement of family and combination of low doses of mirtazapine and olanzapine. She reported modest improvement of her abdominal symptoms and gained 5 kg over two months.

Case 2

Miss C, a banking assistant aged 21 years presented with marked abdominal discomfort associated with eating and reduced appetite secondary to this. She developed symptoms after her mother was diagnosed with carcinoma of the stomach. Her symptoms closely resembled those of her mother. She ate very slowly to reduce discomfort and took more than one hour to finish a meal. She lost 11kg (weight loss of 22.4%) over three years. She developed secondary amenorrhea 18 months after the onset of symptoms. She did not engage in any activities to reduce her weight. She did not have alteration of bowel habits or abdominal pain.

Anxiety about her heath and that of her mother's was the most striking feature in the mental state examination. Her health concerns could best be described as anxieties rather than delusions or overvalued ideas. She was preoccupied about food and her weight. Miss C believed she was underweight and that her problems would subside if she could have adequate food intake. Personality traits suggested neuroticism. Mental state examination did not reveal any other abnormalities. Weight was 38 kg and BMI was 16.2 kg/m^2. Physical examination showed evidence of fat loss, muscle atrophy and a heart rate of 60 beats per minute.

Miss C had been previously seen by several doctors. She has had numerous blood investigations which were normal except for mild anaemia. She had undergone several ultrasound and CT scans of abdomen and an upper gastrointestinal endoscopy which were normal. She had been treated with two antidepressants with no apparent success.

Once the diagnosis of AN was made she was given psycho-eductaion, motivational interviewing, techniques were used to increase engagement. Relaxation techniques, challenging her thoughts about health, addressing enabling behaviour of family and a combination of quetiapine 50 mg and pantoprazole 40 mg daily were used in the treatment. Anxiety symptoms improved and she gained 5.5 kg over 3 months.

Case 3

Miss S, a 19 year old school girl presented with tiredness, epigastric bloating, fullness of stomach, abdominal soreness after meals and nausea at the sight or smell of food which resulted in her eating only small amounts over 10 months. She developed those symptoms following hospitalisation of her mother for a prolonged period which necessitated Miss S. to take over household chores including cooking, at the cost of studies. Though her mother's illness resolved after two months Miss S's symptoms continued and she lost 12 kg (32% of body weight) over 10 months. Her weight was 25 kg and the BMI was 12.1 kg/m^2 at the presentation. She had secondary amenorrhea of six months duration. She had not engaged in binging or other activities to reduce weight. She did not have diarrhoea, constipation or change of stools. She was investigated for inflammatory disorders of the bowel and malabsorption syndromes, all of which gave negative results.

On mental state examination, her affect was moderately depressed and she was preoccupied about food and weight. She believed she was underweight and wished to gain weight. However, she did not fully understand the seriousness of the low weight. She had no psychotic features or thoughts of self-harm. Clinical examination showed pallor, evidence of fat loss, signi-ficant muscle atrophy, bradycardia (56 beats per minute) and epigastric tenderness. Investigations showed low white blood cell count, hyponatremia and elevated serum cholesterol. Her inflammatory markers, upper GI endoscopy and colono-scopy were normal.

She had been treated with several antidepressants which resulted in mild improvement of symptoms. She was treated with mirtazapine augmented with a small dose of olanzapine. She was given psychoeducation, graded task assignments, clear meal plan with frequent snacks and cognitive restructuring and establishing clear roles of the family members. Her mood markedly improved with treatment and she gained 4 kg over 10 weeks.

Case 4

Ms. T, a 26 year old professional presented with severe abdominal discomfort after eating small amounts of food and secondary loss of appetite. She developed symptoms after starting new job which she found very stressful. She lost 10 kg (20% of body weight) over two years. There was no restlessness, irritability, poor sleep or lack of concentration. She was concerned about her inability to eat and difficulties at work. She was pre-occupied about types of food she can eat and how thin she was. She had anxiety only while at work and around food. She had anxious and avoidant personality traits. Her weight was 50kg and BMI was 15.4 kg/m^2. She had secondary amenorrhoea of seven months duration.

Ms. T sought medical treatment from a number of doctors and had undergone numerous blood tests and an ultra sound scan of the abdomen. Investigations were normal. She had been treated for anxiety with a SSRI which made her symptoms worse because of side effects of gastric irritation. She subsequently consulted a dietician who referred her to a psychiatrist. She was managed with

psychoeducation, relaxation techniques, coping skills and mindfulness. She was treated with 5mg of escitalopram daily. Her symptoms responded well to treatment with a significant improvement in appetite, abdominal symptoms and anxieties around food and job. She gained 7 kg over 15 weeks.

Case 5

Miss F, an 18 year old student of an International School started avoiding food due to abdominal discomfort and nausea. At times nausea was severe and she vomited when exposed to food. However, vomiting was never self-induced. Consequently, she developed a significant dislike for food and lost 7 kg (19.4% of total body weight) over 14 months. Miss F gave a history of secondary amenorrhoea of five months duration. There was no binge eating, excessive exercise or use of slimming agents. No clear precipitating factor could be found. She was studying for an exam, yet she did not consider this as stressful.

She was preoccupied about not being able to eat and gain weight. She was distressed about it and her mood became depressed secondary to the eating problems. The mental state examination did not show any other abnormalities. Physical examination showed prominent fat loss, muscle wasting and poor secondary sexual chara-cteristics. Her weight was 31 kg and BMI was 13.7.

She was admitted for investigations of irritable bowel syndrome or systemic illness such as malignancy. She was subsequently referred for psychiatric assessment as there was no evidence of an organic aetiology. Inflammatory markers, upper GI endoscopy and ultrasound scan of the abdomen were normal. She has never sought mental health treatment before. She was managed using psychoeducation, graded meal plan, cognitive restructuring, reduction of high expressed emotions in the family and mirtazapine 7.5 mg nocte. While depressive mood improved remarkably, there was only a modest improvement in her eating pattern and other symptoms. She gained 3 kg over a period of 2 months.

Discussion

All five patients described above demonstrated persistent restriction of food intake leading to significantly low body weight which was below 85% of expected weight or BMI less than 17.5 kg/m^2. They had endocrine abnormalities manifesting as amenorrhoea and preoccupation about weight or food. While all five patients recognised that they were underweight, some did not fully appreciate the seriousness of the situation. Although they did not have fat phobia they fulfilled the criteria for anorexia nervosa. They gave different reasons for restricted food intake such as bloating, discomfort with food, poor appetite nausea and fear of food. This was similar to the case series in Hong Kong, Singapore, Ghana and India where patients did not have fat phobia and gave similar symptoms as their reasons for food refusal and emaciation [4,7]. These physical symptoms particularly abdominal bloating, discomfort, soreness and nausea may suggest these presentations are due to inflammatory bowel diseases or malabsorption syndromes. All our patients underwent thorough physical work-up to exclude these possibilities.

In four out of five patients the symptoms were associated with a clear stressor such as maternal illness, upcoming exam and demanding job. It can be speculated that they may have tried to exert control over one of life they could regulate such as eating [11]. All patients had affective symptoms and their lack of appetite can be part of mood disorder. Relatively rapid resolution of abdominal symptoms and weight gain, heralded by the improvement of mood symptoms and adequate response to antidepressants may support the above theory. On the other hand, their preoccupation with food and weight, persistent inability to maintain minimum weight and associated endocrine abnormality may suggest that these presentation are in fact a culturally different form of AN.

Atypical presentation of AN may be due to denial and minimisation of the symptoms of fat phobia due to cultural reasons or having low awareness and difficulty in expressing their internal feelings or actually not experiencing any fear of fatness [12]. As previous authors have pointed out intense fear of fatness may be a culture-bound concept and this feature may be inappropriate to identify AN among Asians who may not have the Western pressures to be thin [13,14].

On average, our patients took 16 months (range: 10-36 months) for the diagnosis of AN. Atypical presentation without fat phobia, close resemblance to inflammatory bowel disorders, stigma and lack of awareness among patients and clinicians about NFP-AN may have contributed to the delay. It has been pointed out that the prevalence of eating disorders are rising in Asia [15]. Therefore it is important that Sri Lankan doctors are aware of different presentations of eating disorders including NFP-AN.

Response to treatment was satisfactory in all of the patients. While it is difficult to compare the treatment response of our patients with previous studies due to methodological differences, our patients' outcome appears better [16,17]. Previous studies suggest that non-fat phobia, preserved insight, shorter duration of illness, early age of first treatment and better pretreatment functioning are associated with better treatment response [18-21]. Presence of those good prognostic factors in our patients may explain the satisfactory treatment response.

We used components of enhanced cognitive behavioural therapy for eating disorders (CBT-E) in our

treatment [22]. We involved the family when appropriate considering the context of their presentations. Low doses of antidepressants and antipsychotics were used to address depressive, anxiety and obsessional symptoms and to improve appetite.

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