ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES Knowledge to Innovation

Vol 6, Issue 4, 2013

ISSN - 0974-2441

Research Article

"EATING DISORDER-AN ALARMING HEALTH PROBLEM"

VINITHA ELIZABETH[1], M.SUBHA*[2]

[1]Final year BDS Saveetha Dental College and hospital 162, Poonamalle High Road Velapanchavadi Chennai. [2]Senior Lecturer Department of Oral Medicine and Radiology Saveetha Dental College and hospital 162, Poonamalle High Road Velapanchavadi Chennai.
Email: doctorsubha@gmail.com

Received: 4 August 2013, Revised and Accepted: 27 August 2013

ABSTRACT

Eating disorders are of serious concern in one's health. It is a psychopathological disorder affecting patient's relationship with food body manifesting as distorted eating behaviour [1]. It includes "anorexia nervosa and bulimia nervosa". Anorexia Nervosa (AN) is a biologically based serious mental disorder with high levels of mortality and disability, physical and psychological morbidity and impaired quality of life. Anorexia Nervosa is the leading cause of disease burden in terms of years of life lost through death or disability. Psychotherapeutic interventions are the treatment of choice, and this depends on the stage of illness [2]. Bulimia Nervosa (BN) has a higher prevalence among women [3,4,5]. This article provides overview of presentation, diagnosis, complications, management and treatment of eating disorders.

Keywords:

INTRODUCTION

Eating disorder is defined as a persistent disturbance of eating behaviour or behaviour intended to control weight, which significantly impairs physical health or psychosocial functioning [6, 7].

Anorexia nervosa is a serious mental illness characterized by the maintenance of an inappropriately low body weight to maintain thinness, and distorted cognitions about body shape and weight. Anorexia nervosa commonly begins during middle to late adolescence, although onsets in both pre-pubertal children and older adults have been noticed [8, 9]. It is associated with physiological alterations but the routine laboratory test results are normal. Anorexia nervosa can be classified into subtypes: restricting subtype and binge eating subtype. Patients with anorexia nervosa who rarely binge eat or purge but maintain a fairly regular pattern of caloric restriction come under restricting subtype, and those who engage in binge eating and involve in compensatory behaviour to prevent weight gain are called as binge eating /purging subtype[10].Restricting subtype will eventually develop binge eating[10]. Bulimia nervosa (BN) is characterized by recurrent episodes of binge eating in combination with some form of inappropriate compensatory behaviour [6].Bulimia Nervosa can be classified into 2 subtypes: the purging subtype which is characterized by episodes of binge eating followed by compensatory behaviour such as self-induced vomiting, laxative abuse, and diuretic abuse and the non-purging subtype which is characterized by excessive exercise, fasting or strict diets [10].

ETIOPATHOLOGY

The etiology of eating disorders is widely accepted to be a combination of genetic, psychological and sociocultural factors. The onset of AN is most commonly associated with puberty and its changes, and in general ,the development of eating disorder occurs in the context of an adolescent seeking to cope with a perceived stress. Eating disorder is common in young people who recently immigrated even when the disorder is uncommon in their country of origin [11,12,13].The behaviour they seem to adopt seem purposeful to the adolescent despite the significant,paradoxical and adverse effects these behaviours have on their health. In BN, the features can be depression and mood disorders as well alcohol drug abuse and promiscuity [11, 12].

ANOREXIA NERVOSA

People with AN manifests severe weight loss, with psychological conditions that contribute to mortality [14] with suicides in large number from AN [15].Depression is common but resolves with refeeding [16].Anxiety symptoms are common and often precede the illness [17].There can be delirium, cardiac arrhythmia, coma and death [3]. If AN affects women, during the period of development of peak bone mass, the effects on bone can be severe and debilitating[3] The behaviours of concern include skipping meals, reducing meal portion size or leaving food behind when served a normal portion, vomiting, and exercising compulsively to lose weight. In females, new onset amenorrhea (absence of three consecutive menstrual cycles after menarche) is a common presenting complaint. Less common presentations include general malaise and lack of energy, increasing episodes of light-headedness and exercise intolerance, and poor school performance with academic decline. Chest pains and syncope are associated with increased disease severity [11].

DIAGNOSTIC CRITERIA [11]: V diagnostic criteria for anorexia nervosa*12

- Refusal to maintain body weight at or above a minimally normal weight for age and height
- Fear of gaining weight or becoming fat, even though underweight.
- Disturbance in the way in which one's body weight or shape is experienced, denial of seriousness of current low body weight.
- Amenorrhea in post-menarche females.

LABORATORY FINDINGS

Metabolic acidosis is common with those who purge on vomiting. Rapid shift in fluids and electrolytes, including hypomagnesaemia and hypokalaemia [3].

BULLIMIA

Expression of anxiety, depression, loneliness, perceived loss of control over food intake, self- induced vomiting [1]. Most patients will be of normal weight. Russell's sign, calluses or abrasions on the dorsum of the hand overlying the metacarpophalangeal and interphalangeal joints, caused by repeated contact with the incisors

during self-inducing vomiting. Dental caries and enamel erosion from repeated vomiting occurs. These patients have fluctuating weight but never underweight and their menstrual cycles are usually normal. Patients commonly self-refer requesting help to break the binge/purge pattern. Parental concern is similarly common, although the abnormal eating behaviours. Rarely these patients develop epigastric pain [11].

DIAGNOSIS CRITERIA [11]

• Recurrent episodes of binge eating characterized by both of the following

Eating in a discrete period of time (within any 2 hour period) more food than most people would eat during a similar period of time and under similar circumstances.

A sense of lack of control over the eating during the episode

Recurrent inappropriate compensatory behaviour in order to prevent weight gain such as self- induced vomiting; misuse of laxatives, diuretics, enemas or other medication; fasting; or excessive exercise.

Binge eating and inappropriate compensatory behaviours both occur on average, at least twice a week for 3 months

• Self-evaluation is unduly influenced by body shape and weight.

LABORATORY FINDINGS [3]

Hypokalaemia, metabolic alkalosis, hypochloremia.

MEDICAL COMPLICATIONS [1]

Bradycardia, hypothermia and hypotension are complications associated with anorexic patients, menstrual irregularities coupled with ovarian changes, amenorrhea, stunting of growth, alopecia are seen. In case of bulimic patient's aspiration, oesophageal or gastric rupture, hypokalaemia with cardiac arrhythmias, pancreatitis, drug induced myopathy or cardiomyopathy are associated complications.

ORAL MANIFESTATIONS [1]:

Dental erosion: The specific type of enamel erosion in eating disorders is called perimyolysis.

Dental caries: Dental caries is more prevalent in patient with bulimic group because of high carbohydrate diet.

Periodontal disease: Eating disorder patients have poor oral hygiene which leads to gingival inflammation and thus predispose to periodontitis.

Mucosal lesions: Nutritional deficiencies can lead to cheilitis, candidiasis, glossitis and oral mucosal ulcers. Reduce intake of vitamins, iron deficiency anaemia may lead to generalized mucosal atrophy which cause diffuse burning sensation, Erythematous mucosal lesion is seen in patients who self-vomit.

GENERAL PRINCIPLES IN THE MANAGEMENT OF EATING DISORDERS [6]17, 18, 19, 20]

To establish and maintain a therapeutic alliance is highly important in the management of eating disorders. Many patients with anorexia nervosa are initially reluctant to enter treatment and may remain preoccupied with their symptoms. Many are secretive and may withhold information about their behaviour because of shame. Encouraging patients to gain weight could generate extreme anxiety in them. Addressing patients' resistance to treatment and enhancing their motivation for change is an important aspect of management of eating disorders. Management of eating disorders should be a multidisciplinary approach involving psychiatrists, psychologists, endocrinologists, dentists, gastroenterologists.

Assessment of eating disorder symptoms [17, 18]

An assessment of eating disorder symptoms will assist the clinician in identifying target symptoms and behaviours that will be addressed in the treatment plan as well as in determining the diagnosis of eating disorder. A detailed report of food intake during a single day in the patient's life may be quite informative. A family history should be obtained regarding eating disorders and other psychiatric disorders, alcohol and other substance use disorders, obesity, family interactions in relation to the patient's disorder, and family attitudes toward eating, exercise, and appearance.

Assessment of patient's physical status [19, 20]

A detailed physical examination should be conducted by a physician familiar with common findings in patients with eating disorders, with particular attention to vital signs; physical status (including height and weight); heart rate and rhythm; jugular venous pressure; heart sounds (especially mid-systolic clicks or murmurs from mitral valve prolapse); acrocyanosis; delayed capillary refill; lanugo; salivary gland enlargement; scarring on the dorsum of the hands (Russell's sign); evidence of self-injurious behavior such as ecchymosis, linear scars, and cigarette burns; muscular weakness; indications of muscular irritability due to hypocalcaemia, such as in Chvostek's and Trousseau's signs; and gait and eye abnormalities[6,21,17]. Regular monitoring of basal metabolic index (BMI) should be done.

TREATMENT

ANOREXIA NERVOSA

Anorexia nervosa patients who are emaciated requires urgent medical attention, with close monitoring for dehydration, electrolyte disturbances, renal problems, cardiac compromise with a variety of arrhythmias. Phosphorus supplementation should be initiated early, and phosphorus levels should be sustained above 3.0 mg/dl (to convert to mmol/L, multiply by 0.323). Patients should be monitored daily for hypophosphatemia, hypomagnesaemia, hypokalaemia. Although selective serotonin reuptake inhibitors are frequently prescribed for AN, most placebo-controlled trials have not found evidence that these medications improve weight gain, eating disorders, or associated psychopathology [3].

Nutritional rehabilitation

The goals of nutritional rehabilitation for seriously underweight patients are to restore weight, normalize eating patterns, achieve normal perceptions of hunger and satiety, and correct biological and psychological squeal of malnutrition [6, 22] A healthy weight for female patients is the weight at which normal menstruation and ovulation are normal and, for male patients, the weight at which normal testicular function is normal[6]. Forced nasogastric or parenteral feeding can each be accompanied by substantial dangers. When nasogastric feeding is necessary, clinical experience suggests that continuous feeding (i.e., over 24 hours) may be less likely than three to four bolus feedings a day to result in metabolic abnormalities or patient discomfort and may be better tolerated by patients[6].

Medication

Antidepressants

Selective Serotonin Reuptake Inhibitors likeFluxetine is used [6].

Antipsychotics

Second-generation antipsychotic medications such as olanzapine, quetiapine may improve weight gain and psychological indicators and are used for AN [6,23,24].

Hormones

Investigators have studied three hormones in the treatment of AN: growth hormone (rGH), testosterone, and estrogen.

Antiepileptic drugs

A recent review suggested that Carbamazepine and Valproate may be effective in treating patients of anorexia nervosa when they are used to treat an associated psychiatric (e.g. mood) or neurological (e.g. seizure) disorder; otherwise, both agents, particularly valproate, are associated with weight gain [6].

Nutritional supplement

Birmingham *et al*. determined that 14 mg per day of zinc, in 54 women inpatients (older than 15 years), was associated with accelerated increase of BMI compared to placebo [6, 18,25]

Psychosocial interventions

Although psychosocial interventions, including psycho education, individual therapy, family therapy and (in some settings) group therapy, are considered to be the mainstay of effective treatment for anorexia nervosa, supporting evidence is sparse [6].

BULIMIA NERVOSA

Antidepressants

Early observations that individuals with bulimia nervosa exhibit an elevated lifetime prevalence of mood disorders, together with an elevated prevalence of mood disorders, in their first-degree relatives, prompted initial trials of antidepressants for the acute treatment of bulimia nervosa [25]. In these trials, antidepressants appeared to be effective for bulimia nervosa regardless of whether or not the patient was clinically depressed.

Fluoxetine, an antidepressant of the selective serotonin reuptake inhibitor is the only agent approved by the Food and Drug Administration for the treatment of BN. It should be noted that bupropion is contraindicated because of increased seizure risk in eating disorders. Overall, medication plays a legitimate role in reducing the symptoms of BN. [3].The most effective treatment of BN is a specific type of psychotherapy, CBT (Cognitive behavioral therapy).CBT specifically directed at the eating disorder symptoms that focuses on modifying specific behaviors and ways of thinking that maintain binge-eating and purging behaviors[6]

DENTAL TREATMENT [1]

Restoration of dental health is important part of regaining normal appearance. Composite restoration is done to reduce sensitivity. Regular dental check-ups should be encouraged. Restorative care depends on the severity of hard tissue destruction. But all these are to be done after treating the eating disorder.

CONCLUSION

Eating disorders are severe psychological illnesses associated with a host of adverse medical morbidities, negative psychological sequel, and substantial reductions in quality of life. Given these consequences and the fact that health service utilization among people with eating disorders is relatively high, it is particularly important for physicians to adequately assess for these disorders. The oral manifestations should be diagnosed else it may lead to serious systemic problems in addition to progressive, irreversible damage to the hard tissues of oral cavity. The overall prevalence of eating disorders among children and adolescents is rising – the younger age group are more likely to present with AN, while older adolescents can present with either AN or BN.

REFERNCES

1. Neeta Misra, AnshulMehra, PradyumMisra, Jaya Mehra. Oral manifestation of Eating Disorders. JIAOMR, 2010;22940:S19-22.
2. Ulrike Schmidst et al.The MOSAIC study - comparison of the Maudsley Model of Treatment for Adults with Anorexia Nervosa (MANTRA) with Specialist Supportive Clinical Management (SSCM) in outpatients with anorexia nervosa or eating disorder not otherwise specified, anorexia nervosa type: study protocol for a randomized controlled trial.BMC,2013,14:160.
3. Leslie A. Sim,et al. Identification and Treatment of Eating Disorders in the Primary Care Setting.MayoClin Proc.2010:85(8):746-51.
4. Hudson JI, Hiripi E, Pope HG Jr, Kessler RC. The prevalence and correlates of eating disorders in the national comorbidity survey replication. *Biolpsychiatory*.2007;61(3):348-358.
5. Fairburn CG, Beglin SJ. Studies of the epidemiology of bulimia nervosa.*Psychiatory.*1990;147(4):401-408.
6. KauatavChakraborty, DebasishBasu.Management of anorexia and bulimia nervosa: An evidence-based review. Indian J Psychiatry. 2010; 52(2):174-186.
7. Fairburn CG, Walsh BT. Atypical eating disorders (Eating disorder not otherwise specified). Eating disorders and obesity: A comprehensive handbook. In: Fairburn, Brownell, editors. London: Guilford; 2002. pp. 171–7.
8. Evelyn Attia, B. Timothy Walsh.Anorexia Nervosa. Am J Psychiatry.2007, 164:12.
9. Sullivan PF: Mortality in anorexia nervosa. Am J Psychiatry 1995; 152:1073–1074
10. Eddy KT, Dorer DJ, Franko DL, Tahilani K, Thompson-Brenner H, HerzogDB. Diagnostic crossover in anorexia nervosa and bulimia nervosa: implications for DSM V Am , J.-Psychiatory2008;165(2):245-250.
11. Aranzazu Gonzalez etal.Eating disorders in Adolescents. Australian Family Physicians.2007;36:8:614-619.
12. Reijonen JH, Prat HD, Patel DR, Greydanus DE. Eating disorders in the adolescent population: an overview. J Adolesc Res 2003;8:209–22.
13. Alexander N, Kohn M, Feeney K, Clarke S. The changing faces of anorexia nervosa. In: Bashir M, Bennett D, editors. Deeper dimensions: culture, youth and mental health. Sydney: Transcultural Health Centre, 2000;119–22.
14. Godart N, Berthoz S, Rein Z, et al. Does the frequency of anxiety and depressive disorders differ between diagnostic subtypes of anorexia nervosa and bulimia Int J Eat Disord 2006;39(8):772-778
15. Mehanna HM, Moledina J, Travis J. Refeeding syndrome: what it is, and how to prevent and treat it. 2008; 336(7659):1495-1498.
16. Rome ES, Ammerman S. Medical complications of eating disorders: an update. J Adolse Health 2003;33(6):418-426.
17. Golden NH, Meyer W. Nutritional rehabilitation of anorexia nervosa: Goals and dangers. Int J Adolesc Med Health.2004; 16:131–44.
18. Birmingham CL, Beumont PJV. Medical management of eating disorders. Cambridge, UK: Cambridge University Press; 2004. A Practical Handbook for Healthcare Professionals.
19. Mehler PS, Andersen AE. A guide to medical care and complications. Baltimore: Johns Hopkins University Press; 1999.
20. Miller KK, Grinspoon SK, Ciampa J, Hier J, Herzog D, Klibanski A. Medical findings in outpatients with anorexia nervosa. Arch Intern Med. 2005;165:561–6.
21. Katzman DK. Medical complications in adolescents with anorexia nervosa: a review of the literature. Int J Eat Discord 2005;37(suppl):S52-S59.
22. American Psychiatric Association. Treatment of patients with eating disorders.Am J Psychiatric. (third edition) 2006;163:4–54.
23. Kaye WH, Gwirtsman HE, Obarzanek E, George DT. Relative importance of calorie intake needed to gain weight and level of physical activity in anorexia nervosa. Am J ClinNutr.1988; 47:989–94.
24. Attia E, Haiman C, Walsh BT, Flater SR. Does fluoxetine augment the inpatient treatment of anorexia nervosa.Am J Psychiatry.1998; 155:548–51.
25. Birmingham C, Goldner EM, Bakan R. Controlled trial of zinc supplementation in anorexia nervosa. Int J Eat Disord. 1994; 15:251–5.