INVITED ARTICLE

EATING DISORDERS

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ABSTRACT

The main forms of eating disorders are anorexia and bulimia nervosa and obesity. The clinical features, aetiology, treatment and prognosis of anorexia and bulimia nervosa are described to highlight the similarities and differences between these two conditions. Both conditions affect predominantly the young female population with body image disturbance as one of the core symptoms. Whilst the body weight of anorexics are by definition low, most bulimics have normal or near normal body weight. Sufferers of anorexia nervosa tend to deny their illness while those with bulimia are often miserable and acutely aware of their eating difficulties. The aetiological factors in both conditions overlap to a large extent. The outcome of treatment for bulimia is reportedly better than that of anorexia nervosa. Obese people often become depressed and anxious as a result of low self-esteem causing them to seek psychiatric treatment. The severely obese who are placed on very low calorie diets may develop adverse emotional disturbances whilst weight gain may follow a major depressive illness or develop as a side effect of psychotropic medications. A subgroup of the obese population engage in frequent binge eating and preliminary criteria are being developed for this condition called "binge eating disorder". Behaviour therapy is the treatment of choice for obesity. Other forms of treatment include individual and group psychotherapy, use of appetite suppressants and in the severely obese, surgical methods.

Keywords: *eating disorders, anorexia nervosa, bulimia nervosa, obesity.*

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Introduction

Eating disorders are characterised by gross disturbances in eating behaviour[1]. It includes mainly anorexia nervosa and bulimia nervosa[1,2]. Cases of anorexia nervosa were already reported from the 1600s. Bulimia nervosa is more recently recognised and was initially considered an "ominous variant of anorexia nervosa"[3]. Studies have since borne out its generally more benign course. Bulimia nervosa can be regarded as a separate but related entity to anorexia nervosa, or part of an eating disorder spectrum which can be further widened to include obesity. There is no valid DSM IIIR[1] OR ICD10[2] definition for obesity. ICD 10 however allows for obesity initiated and maintained by psychological factors to be classified under the rubric of Eating disorders.

Clinical features of anorexia nervosa

Essential to anorexia nervosa is a core group of symptoms resulting in body weight 15% below that of mean population matched weight. This weight loss or failure to gain weight is self-induced in a person with a morbid fear of becoming fat and a distorted perception of body image, in which they feel fat despite being emaciated. In females, amenorrhea is included as a core symptom.

Anorexia nervosa is ten times more common in women with peak ages of onset between 14 and 17. There appears to be two subtypes. Restrictive anorexics control weight primarily by dieting and exercise. Bulimic anorexics alternate between episodes of binge eating and starvation and vomit and abuse laxatives and diuretics more frequently.

Frequently observed behavioural features include an overconcern with nutritional topics and obsessive and ritualistic behaviour particularly surrounding food. They are hyperactive and often exercise vigorously. Most withdraw socially and sexual libido is diminished.

Physical changes include a typical emaciated appearance with dry skin, fine lanugo hair and mild alopecia. There is marked proximal muscle weakness and cold peripheries. Bradycardia and hypotension occur secondarily to slowed metabolism. Constipation is frequent. Amenorrhea precede or follow weight loss. In prepubertal patients, general physical development may be retarded and sexual maturation arrested. Electrolyte abnormalities can occur in those who vomit or abuse laxatives or diuretics. Cardiac arrhythmias can result in sudden death.

Associated psychological symptoms include sleep disturbances, obsessional neurosis (20%) and depression (up to 50%).

Clinical features of bulimia nervosa

There are three key features in bulimia nervosa. Firstly, patients manifest recurrent episodes of binge eating, defined as the rapid consumption of large amounts of food in a short period of time. Binge eating is often followed by guilt, self-disgust, depression and in some cases, self-mutilation. The next feature is compensatory behaviour engaged to prevent weight gain. Most induce vomiting after the binge and follow a strict diet in between. Others may in addition abuse laxatives, diuretics and slimming pills and overexercise. The third key feature is the disturbance of attitude to body weight and size. Bulimics show persistent overconcern about their shape and weight and perceive themselves as fat and flabby even though most are within the normal weight range. In this respect they resemble anorexics to some degree.

The usual age of onset is slightly later than anorexia nervosa, occurring between the ages of 16-40 years, with peak at 20 years. A quarter has a history of anorexia nervosa[4].

Physical features include painless parotid swelling, hoarseness of voice, dental erosions and gastrointestinal reflux resulting from recurrent vomiting. Calluses may be present on the dorsum of the hand. Metabolic disturbances, particularly hypokalaemia and hypochloraemic alkalosis, may lead to weakness, arrhythmias, ileus and renal damage.

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Common psychological symptoms include depressive feelings and major depression. Self-mutilation and suicide attempts are not infrequent. There may be associated problems of impulse control such as drug and alcohol abuse, gambling and sexual promiscuity.

Epidemiology of eating disorders

There is evidence that the prevalence of eating disorders is increasing. A case register study of first admissions for anorexia nervosa reported a significantly increased incidence from 0.42/100,000 in 1970 to 1.36/100,000 in 1989[5]. Current information suggest that in females aged 15 – 30, reasonable estimates for the prevalence of anorexia nervosa is less than one percent, 1–2% for bulimia nervosa and 5% for obesity. Atypical eating disorder, which represents the group not fulfilling full diagnostic criteria for anorexia or bulimia nervosa, is estimated to be around 15%[6].

Aetiology of anorexia and bulimia nervosa

There is a large area of overlap between the supposed factors involved in the aetiology of anorexia and bulimia nervosa and no single theory offers a satisfactory explanation. It is likely that certain factors or combinations thereof operate significantly more for particular individuals. Virtually all authorities agree that the cause is largely psychological.

The social importance attached to physical beauty as represented by a thin and fit body shape and promoted by the media, is seen as a necessary setting to the increasing prevalence of eating disorders. The culture of competitiveness and achievement is also cited as a factor as evidenced by the high prevalence of eating disorders among college (1%)[7] and ballet students (7.6%)[8].

Family and twin studies indicate a genetic predisposition to anorexia nervosa but fail to demonstrate the mode of transmission. Predisposing psychosocial factors within the family include parental discord, divorce or death. Families of anorexics are frequently observed to show an unusual interest in food and physical appearance, are overprotective and enmeshed, have rigid rules and find difficulty resolving conflicts. In such settings, adolescent development is impeded. In some families, the development of anorexia nervosa serve to prevent dissent in the family. In families of bulimics, the father is often dominant and demanding while the mother is perceived as passive and ineffectual. Childhood sexual abuse has also been cited as a nonspecific risk factor.

Anorexia nervosa for some represents a personal struggle for a self-respecting identity in an adolescent with low self esteem[9]. It would appear that success in slimming gain them a sense of autonomy and effectiveness previously denied. It is also been postulated that anorexics regress to the prepubertal state to escape from dealing with the emotional problems of adolescence including issues of sexuality[10].

It is widely accepted that for the anorexic, the problem typically emerges around puberty, when the body develops into adult shape and functions and the person is confronted with the developmental challenges of adolescence. For the normal weight bulimic, the developmental problems are slightly more advanced and involve issues of achieving a balance between relationships and a sense of separateness, and tackling the challenges of young adulthood. For both, the core symptom is an obsession with food, weight and body shape that becomes a defensive substitute for dealing with the conflicts associated with the achievement of an identity. In the overall context, eating disorders are likely to represent a struggle for power and control in certain individuals whose personal and social experience has led them to feel especially deficient.

Treatment of anorexia nervosa

Anorexia nervosa is a complex and often chronic condition and requires ongoing commitment from the treatment team. A comprehensive treatment plan is necessary and best initial results appear to be linked to weight restoration accompanied by individual and family psychotherapies when the patient is medically ready to participate. The patient and her family's cooperation has to be engaged from the beginning as this is an important factor in determining a favourable outcome.

Inpatient treatment is advised in the presence of medical urgency such as severe and rapid weight loss, severe loss of energy, hypokalaemia or electrocardiographic changes, a cycle of bingeing, vomiting and restriction that cannot be broken, low motivation, inadequate family support and failed outpatient treatment.

The basic treatment programme involves a behavioural modification programme aiming to increase weight (1-2kg/week) based on principles of operant conditioning. A "target weight" close to the matched population mean weight is set with the patient's knowledge. Forced feeding is reserved only for life-threatening deterioration in the patient's condition.

Psychotherapeutic interventions are crucial when awareness of the issues perpetuating the illness surface as weight is regained. Individual psychotherapies that provide support to the patient and focus on issues of autonomy and control are often successful. Family therapies which view the symptoms in the context of family structure and dysfunction are effective in children, teenagers and adults still living at home. Assertiveness and social skills training in a group setting help improve self-esteem and reduce social isolation.

Adjunctive pharmacological treatment is best reserved for symptomatic relief during "crisis" periods in behavioural regimes. Cyproheptadine, a specific appetite stimulant has been used. Phenothiazines, particularly chlorpromazine, are helpful in anxious patients, help sleep and have a mild effect on stimulating the appetite. Tricyclic antidepressants may be indicated in those who develop depression.

Current practice is moving towards outpatient treatment, which is particularly suitable for chronic and milder cases. Although recovery of weight may take longer, it has the advantage of giving the patient responsibility at an early stage for their own eating and weight.

Prognosis of anorexia nervosa

Short term response to hospital-based treatment programmes is good but relapses or a transition to bulimia may occur. The mortality rate has been between 15 to 21% [11] but many studies now report rates of 2 to 6% [7,12], most likely because of earlier identification and referral to experienced treatment centres.

Treatment of bulimia nervosa

The initial stages in the treatment of bulimia nervosa involve nutritional counselling, education on the effect of fasting on hunger, craving and binge eating and medical stabilisation. Current research emphasises the effectiveness of a cognitive-behavioural approach to therapy. Central to this approach is the establishment of a regular eating pattern to break the cycle of alternating starvation and binge eating. An eating diary where all food intake, its antecedents and consequences are carefully recorded, is an important strategy. This helps the patient to identify triggers they could avoid and adopt contingency plans of alternative pleasurable and rewarding activity in place of binge eating. Cognitive strategies help them to identify dysfunctional

thoughts or attitudes which underpin the eating disorders and encourage them to replace such thoughts with alternative and helpful ones. Psychodynamic approaches have additionally help some to resolve psychological conflicts.

Group therapy with other bulimics has been found to provide additional support. Family and marital assessment and intervention should be provided when needed or possible.

Pharmacological approaches are generally unsatisfactory and unproven. Patients with concomitant major depression may be helped with an antidepressant. Newer antidepressants that selectively inhibit serotonin reuptake such as fluoxetine have led to a significant short term improvement but await confirmation from further studies[12].

Prognosis of bulimia nervosa

Overall short-term success rate is reported for patients receiving psychological therapies with about 70% reporting substantial reduction of bulimic symptoms[12]. Little is however known about the natural history and long-term outcome of bulimia nervosa.

Obesity

There is controversy as to whether obesity can be classified as an eating disorder. Some would consider obesity as resulting from a habitual disturbance of eating behaviour while others stipulate that the eating behaviour of obese people resembles that of normal weight people and they merely eat more than their energy expenditure demands. The population of the obese is therefore likely to be heterogeneous and its aetiology multidimensional.

The Body Mass Index (Weight/Height^2) is conventionally used to define obesity (Table I).

Table I – The Body Mass Index (Weight/Height^2)

Grade	BMI	Weight Range
0	19 – 24.9	Normal
I	25 – 29.9	Overweight
II	30 – 39.9	Obesity
III	>40	Severe/Morbid Obesity

While the management of obesity does not frequently come under the purview of the psychiatrist, the following aspects of its aetiology and management are of relevance.

Obese people often have perceptual difficulty at judging how much they have eaten and tend to eat even after they have recently eaten. Their eating appears to be related more to external stimuli such as the smell and sight of food and time of the day rather than internal cues of hunger and satiety. They often continue to see themselves as fat even after weight loss.

Certain individuals gain weight following some traumatic life events or when they suffer from a morbid psychological disorder such as major depression. Weight gain is also a common side effect of psychotropic medications such as tricyclic antidepressants, phenothiazines and lithium. Obese people often become depressed and anxious secondary to low self-esteem and stigmatisation. Severely obese people placed on a low energy diets have reported adverse emotional reactions of preoccupation with food, nervousness, irritability and depression.

Apart from the above, binge eating had been found to represent a serious problem in a subgroup of obese individuals seeking treatment[13]. More common in women, such individuals experience lower self-esteem and high levels of depression and other psychiatric disorders. They practise greater dietary restraint and set unrealistically high dieting standards. Their binge eating often complicate standard weight reduction programmes. They are more likely to drop out of treatment and more prone to regain weight following treatment. The DSM IV Workgroup on Eating Disorders has developed preliminary criteria for this new eating disorder called "binge-eating disorder"[14].

Essential to the management of obesity is the establishment of an encouraging and supporting therapeutic relationship. Nutritional education and a careful calorie controlled diet aiming at gradual weight loss (1-2 kg per week) is prescribed. The patient is helped to restructure his daily routine to include regular exercise and meals. Behaviour therapy is the treatment of choice and involve diary recording of all food consumed, the regulation of environmental cues for eating and the self-reinforcement of weight loss. Individual and group psychotherapy is helpful in dealing with underlying psychological conflicts and frequent feelings of guilt and failure. Drugs, mainly appetite suppressants such as phentermine and dexfenfluramine, have limited use and high relapse rates after stopping. Surgery for the massively obese tend to improve quality of life. Dental splinting, truncal vagotomy, gastric bypass or partition and intestinal bypass are some of the methods employed. Of note is that 25% of bypass patients develop postoperative depression.

The prognosis for losing weight and keeping it off is generally poor, even with treatment.

Conclusion

Recently published studies indicate that eating disorders occur in women of all social classes and racial groups[12]. The actual incidence and prevalence of eating disorders in the local population is unknown although cases have regularly been diagnosed by both physicians and psychiatrists. A study[15] has found that the clinical picture and general dynamics of local cases of anorexia nervosa resemble that found amongst western populations. The number of cases was however small and no definite inferences could be made. Cases of bulimia are less commonly seen.

It may not be unreasonable to suggest we have a sizeable population of eating disorders that has not reach medical attention. This is because we have inherent in our population the established aetiological factors for eating disorders: the cultural emphasis on the thin ideal body shape, the generally felt high degree of competitiveness and eating being cited as a favourite pastime. Epidemiological studies are called for to confirm this.

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