



Family-based approach to anorexia nervosa

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KEYWORDS:

Anorexia nervosa;
Ideal body weight;
Multidisciplinary;
Family-based;
Maudsley Method

OBJECTIVE: Family-based approaches have proven successful in the treatment of adolescents with anorexia nervosa (AN). This observational study aimed to demonstrate that a family physician with a multidisciplinary team, using a family-based approach, could successfully treat adolescents with and at risk for AN.

METHODS: Retrospective data was obtained for 9 young women, including age, gender, height, weight, and status of menstruation. Ideal body weight (IBW) and 85% IBW were calculated at each visit.

RESULTS: Eight participants remained in the program and achieved 85% IBW, while remaining above 85% IBW for an additional 3 months. Seven participants remained above 85% IBW for 6 months. Those 7 participants were initially oligomenorrheic, and all resumed normal menses during the course of treatment.

CONCLUSION: Patients with or at risk for AN can be effectively cared for by a family physician with a multidisciplinary team, applying a family-based approach to treatment.

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Eating disorders encompass a spectrum of illnesses ranging from anorexia nervosa (AN) to bulimia nervosa (BN) and are found most commonly among adolescent and young adult females. Both conditions can cause significant morbidity and mortality.¹⁻⁴ In fact, AN carries the highest mortality rate among all of the psychiatric disorders.^{4,5}

AN is a devastating disorder characterized by a person's refusal to maintain ideal body weight (IBW), amenorrhea, fear of gaining weight, and denial of illness with disturbance of body image. In addition, individuals with AN often exhibit cognitive distortions such as obsessive thinking, perfectionism, and negative self-worth.⁶⁻⁸ The medical complications of AN involve multiple organ systems. These individuals often have electrolyte imbalances and nutrient deficiencies caused by restriction of intake, laxative use, and self-induced vomiting. Failure to maintain healthy body

weight can also lead to osteopenia, which is potentially irreversible despite weight restoration.^{5,9-11}

Patients at risk for the development of AN include those with a myriad of unhealthy weight-control behaviors (including self-induced vomiting, laxative or diuretic use, excessive exercise, and restriction of food intake); obsessive thoughts about food, weight, or exercise; preoccupation with body image; and low body mass index (BMI).^{12,13}

Because of the significant morbidity associated with eating disorders, early intervention and management are essential to minimize both the psychological and physical sequelae, because numerous studies show that early intervention results in superior outcomes and prognoses.^{9,14-18} One study suggests that aggressive treatment of patients with eating disorders not otherwise specified (ED-NOS), or subclinical AN, will prevent the onset of full-syndrome AN.¹⁵

The family practitioner serves as the primary care provider for most adolescents,¹⁵ and many adolescents with an underlying eating disorder will present with nonspecific complaints such as fatigue, abdominal pain, amenorrhea,

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and depression.^{10,16} The family physician is in a unique position to diagnose and treat an eating disorder in the disease's earliest stages, often when the symptoms and behaviors lead to a diagnosis of ED-NOS or subclinical AN.

In addition, it is critical that patients with eating disorders are treated by a multidisciplinary team that provides medical, psychological, social, and educational needs. The American Psychiatric Association¹⁹ and the Society for Adolescent Medicine¹³ both assert that a multidisciplinary approach to the treatment of eating disorders be the standard of care, an approach that has been shown to improve health outcomes.^{20,21} The medical home concept, which emphasizes the advantages of a coordinated care approach by multiple health professionals in a single setting, has recently gained considerable popularity and provides an ideal setting in which to deliver care to patients with eating disorders.^{22,23}

The Maudsley Method, a manualized, family-based treatment, has shown to be superior to an individual approach to the treatment of AN, especially in patients under 19 years old with duration of illness under three years.^{14,18,24-27}

The Maudsley Method encompasses a 3-phase, multidisciplinary treatment model for the treatment of anorexia nervosa, focusing on restoration of a healthy weight (>85% IBW) to reverse and/or prevent the medical complications of starvation and malnutrition. The first phase aims to restore the adolescent to a healthy weight. This phase relies on placing the responsibility of refeeding with the parents. The second phase aims to return responsibility of eating back to the adolescent. The third and final phase aims to reframe distorted thinking, restore relationships, and encourage the creation of identity and autonomy associated with adolescence.

In this study, the investigators adapted the Maudsley Method to the treatment of eating disorders in a family practice residency clinic. The objective of the study was to demonstrate that a family physician with a multidisciplinary team, using a family-based approach, could successfully treat patients with and at risk for anorexia nervosa.

Methods

A retrospective chart review was completed and included 9 young women aged 13 to 17 from a family practice residency eating disorder clinic. Inclusion criteria were a diagnosis of AN or ED-NOS in patients identified as at risk for AN (ie, below IBW, self-induced vomiting, restricted intake, laxative or diuretic use) and age <18 years. In addition, the investigators required parents or guardians of the adolescents to be present for each appointment and engaged in the treatment. Data obtained in the chart review include age, gender, weight, height, presence or absence of menses, and the number of eating disorder-related office visits.

The participants in this study attended an eating disorder clinic that takes place monthly at the family practice residency clinic with a treatment team consisting of a family physician, a registered nurse, a nutritionist, and a social worker. The core members of the treatment team were the same each month, maximizing the consistency for patient care. The clinic also serves as a training site for family practice residents and medical students.

This research was reviewed and approved by an institutional review board.

Results

IBW and 85% IBW were calculated for each subject at each visit. Each participant's weight was obtained from the initial visit and from visits 3 and 6 months after attaining 85% IBW (Tables 1 and 2). Of the 9 participants, 2 (22%) met diagnostic criteria for AN (DSM-IV TR) at their initial visit (Participants D and I). Four participants (44%) were found to be >85% IBW but below IBW (participants E, F, G, and H). The 3 remaining participants (33%) were found to be at or above IBW but were at risk for AN (eg, restriction of intake, purging behaviors, or reported history of AN) (participants A, B, and C). One subject who was initially >85% IBW, but below IBW, fell to <85% IBW during treatment in the clinic. She did not consistently attend the clinic and

Table 1 Individual weight statistics at initial visit and at the 3- and 6-month visits after attainment of 85% IBW

Subject	Initial weight (kg)	Lowest weight (kg)	Weight when >85% IBW (kg)	Weight at 3 months (kg)	Weight at 6 months (kg)	% Weight gain at 3 months (kg)	% Weight gain at 6 months (kg)
A	57.7	57.7	57.7	63.6	66.8	10%	16%
B	46.4	46.4	46.4	50.5	51.8	9%	12%
C	47.7	47.7	47.7	50.5	49.5	6%	4%
D	36.4	36.4	40.0	45.9	44.1	26%	21%
E	43.6	43.6	43.6	50.0	55.0	15%	26%
F	37.3	31.8	No data*	No data*	No data*	No data*	No data*
G	46.8	45.9	46.8	47.3	46.4	1%	-1%
H	43.0	42.3	43.0	47.3	No data†	10%	No data†
I	38.2	38.2	39.6	41.4	44.6	8%	17%

*No data available because subject did not achieve 85% IBW.

†No data available because subject moved away before 6-month follow-up.

Table 2 Summary of weight statistics for all participants

	Minimum	Maximum	Mean
Initial weight (kg) (n = 8)	36.4	57.7	45.0
Lowest weight (kg) (n = 8)	36.4	57.7	44.8
Weight when achieved 85% IBW (kg) (n = 8)	39.6	57.7	45.6
Weight 3 months after attainment of 85% IBW (kg) (n = 8)	41.4	63.6	49.6
Weight 6 months after attainment of 85% IBW (kg) (n = 7)	44.1	66.8	51.2
Weight gain 3 months after attainment of 85% IBW (%) (n = 8)	1.0	26.0	10.6
Weight gain 6 months after attainment of 85% IBW (%) (n = 7)	-1.0	26.0	13.6

ultimately dropped out of the program (subject F). After attainment of 85% IBW, 8 participants maintained 85% IBW for 3 months and 7 participants maintained 85% IBW for 6 months. One subject (subject H) moved away from the area just before a 6-month follow-up.

For the participants with data at 3 months' postattainment of 85% IBW (n = 8), the average weight gain from their initial weight was 4.59 kg ($p = 0.002$), and the average weight gain from their lowest weight was 4.79 kg ($p = 0.001$), with a mean percent weight gain (initial to 6 months) of 10.71% ($p = 0.012$). For the participants with data at 6 months' postattainment of 85% IBW (n = 7), the average weight gain from their initial weight was 5.91 kg ($p = 0.009$), and the average weight gain from their lowest weight was 6.04 kg ($p = 0.006$), with a mean percent weight gain (initial to 6 months) of 13.57% ($p = 0.009$).

Menstrual records were also obtained for each subject. All participants were initially oligomenorrheic, and all participants who remained in the program resumed normal menses by 6 months.

Discussion

Eating disorders in adolescent patients often go unrecognized.² Family physicians play a unique role in the care of adolescent patients because they have a significant amount of contact through long-standing relationships with patients and their families. The family medicine residency clinic is ideally suited to offer comprehensive care for patients with eating disorders through coordination and delivery of medical, nutritional, and psychological services.

The current study demonstrated that delivery of care by a family physician with a multidisciplinary team using a family-based treatment approach can be successful for patients with or at risk for AN. It is well documented that early intervention for patients with eating disorders or those at risk for eating disorders demonstrates a positive impact on disease progression, including quicker recovery time and fewer long-term physiological and psychological sequelae. A family physician with no additional special training in eating disorders, but with an understanding of the Maudsley Method, can make the diagnosis and intervene promptly. Our study demonstrated considerable success with this ap-

proach because patients had an average weight gain of 13% from baseline to the 6-month follow-up after attainment of 85% IBW, and all patients who remained in the study resumed normal menses.

Our study was strictly observational using a retrospective chart review, and there are a number of improvements that merit further exploration. First, the primary measures of outcome in this study were weight gain and resumption of normal menses. The study lacked consistent assessment of psychosocial status and needs. The psychosocial assessment is a key component of the multidisciplinary approach to care and should be included in the planning and development of a clinic focusing on management of eating disorders. Second, the investigators applied components of the Maudsley Method, namely emphasis on family involvement and use of a team approach, but did not follow the pure, manualized treatment method, because of constraints on available time, space, and staff. This study does illustrate positive outcomes related to family involvement in and a team approach to treatment, but it does not provide information on the efficacy of the Maudsley Method itself. More investigation into the use of the Maudsley Method in a variety of settings is merited. Third, the clinic sees patients of all ages and all forms of eating disorders, the minority of which are adolescents with or at risk for AN, and even fewer who have families engaged in treatment.

Conclusions

Our study demonstrated that patients with AN or those at risk for AN can be effectively cared for by a family physician with a multidisciplinary team applying a family-based approach to treatment.

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