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CHILD AND ADOLESCENT DISORDERS (TD BENTON, SECTION EDITOR)

Treatment of Anorexia Nervosa in Children and Adolescents

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Abstract In this review, we discuss the treatment of anorexia nervosa (AN) in children and adolescents, highlighting inpatient and outpatient psychiatric treatment. AN is an illness that involves medical and psychological issues; hence, treatment often requires the seamless integration of several medical professionals. It is important that the treatment model be unified and consistent as patients transition from inpatient to outpatient treatment. We briefly describe the therapeutic principles involved in treatment of AN and then give examples of how we employ these principles across treatment settings and with multiple medical professionals.

Keywords Anorexia nervosa · Child · Adolescent · Family therapy · Treatment · Inpatient · Outpatient

Introduction

In the 1970s, Minuchin and colleagues [1] published a case series of adolescents with anorexia nervosa (AN) who were successfully treated with family therapy. The case series elaborated on a family therapy approach to the treatment of AN that demonstrated improved remission rates compared with the more individually based treatments being employed at that time. Liebman et al. [2] noted in their description of the treatment process that "it is our contention that anorexia nervosa can best be approached with a therapeutic focus on the context of the patient's family. Direct involvement of the family early in the course of the acute cachectic phase promotes rapid, significant weight gain, facilitating the return of the patient to the family and peer group in a comparatively short period of time …" The goal was to change the behavior of the patient by supporting the parents (and family members) to ensure that their child ate, gained weight, and reduced compulsive hyperactivity [2].

To date, the basics of the behavioral family therapy approach to the treatment of AN are largely congruent with those developed in the 1970s. The usefulness of a family therapy model for the treatment of AN in children and adolescents has been validated by controlled studies [3], and a manual has been written describing the basic process of the therapy [4]. It would seem logical to assume that the basic treatment approach to AN in children and adolescents has changed and improved since the 1970s. Unfortunately, this is not the case, although the evidence base to support family involvement has grown. The most recent large, controlled trial comparing more individually focused treatments with a family therapy–focused treatment (termed *family-based treatment*) revealed improved results with family treatment; the authors hypothesize that family treatment is superior to more individually focused treatment to prevent relapse [5•]. Although theoretical explanations may differ [6], the family treatment models have more similarities than differences. The basic principle is to support the parental dyad to require their child to gain weight.

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Inpatient Treatment

Several descriptions of the basic treatment approach can be found in the literature [4, 6], with many studies supporting its effectiveness [2, 5•]. We describe herein our general approach to the treatment of a child or adolescent with AN, beginning with admission to an acute care medical hospital. The goal is to have a maximally therapeutic experience with the patient and family as we begin treatment in a setting that is tailored to nonpsychiatric medical disorders.

The steps involved in hospital assessment are outlined in Fig. 1. Patients are admitted to an inpatient medical unit based on age and criteria outlined by the American Academy of Pediatrics [7]. Briefly, the criteria consist of very low weight/body fat, refusal to eat, poor cardiac status, hypothermia, or arrhythmia. An accurate baseline weight is obtained by instructing the patient to void, change into a hospital gown with underwear only, and use a stadiometer that will be the identified scale for all subsequent weights. Nutrition consultation determines the initial caloric requirements. Current guidelines recommend initial calorie replacement starting below daily calorie requirements, although this approach has been questioned recently as being unduly restrictive [8]. An interdisciplinary team meeting attended by the pediatrician, psychiatrist, social worker, nurse, and nutritionist is held to discuss history and diagnosis, including a medical work-up, monitoring, psychiatric issues, and safety concerns. Following the meeting, representatives from each discipline take part in a family meeting to discuss with the patient and family the reason for admission, medical concerns, structure of the program, and expectations for the patient.

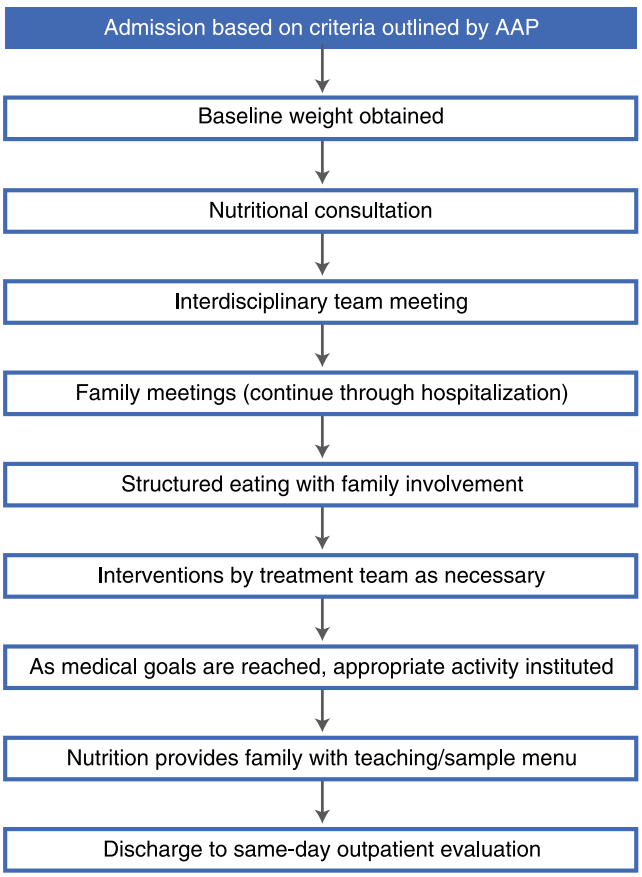

Fig. 1 Steps involved in hospital assessment of anorexia nervosa. AAP, American Academy of Pediatrics

Food is defined as a necessary life-saving medicine that is prescribed by the team to begin the process of recovery. The meals and/or snacks are ordered by the physicians from a predetermined diet set, and patient and family are not given a choice regarding the menu and meals that are prescribed. This approach is best conceptualized as similar to a medical illness such as pneumonia, for which the patient and family would not select the antibiotic to be used. The patient sits at a table in his or her hospital gown for the meals and snacks. Meal trays arrive at the nursing station instead of the patient's room to check the food and the time of the meals. All food packaging containing labeled nutrition information is removed. The patient has 30 min to complete the meal. After 30 min, the meal tray is removed. Any remaining food/drink is measured, and the patient is required to drink an equivalent amount of nutritional supplement within 15 min. If the patient consistently refuses to eat the food or supplement, or is found to hide the food or regurgitate, nasogastric feeding can be used as a last resort to prevent weight loss in a life-threatening situation. Nasogastric feeding is rarely necessary because patients are motivated to eat and gain weight to go home. The meals are followed by a 1-h rest period during which the patient is on strict bedrest and is not allowed to go to the bathroom. The family is encouraged to eat meals alongside the patient from the start of the hospital stay. A psychiatric care specialist monitors the patient at all times at the beginning of the inpatient medical stay. His or her role is to observe and support the patient and parents to eat. Any problems and dysfunctional family dynamics are noted and recorded. This information is useful for the team in formulating the necessary interventions. Staff members are trained to encourage the consumption of food and reinforce the expectations that the food is to be eaten within the established time limit. It is often necessary to redirect discussions with the patient away from calories, weight, exercise, and body image distortions. Bathroom/shower periods are monitored by a same-sex staff member.

Initially, patients are on strict bedrest except for meal times because of the medical requirement to curtail all unnecessary calorie expenditures. Once it is medically safe to do so, the patient is allowed to attend certain activities on the unit. However, exercise of any kind is prohibited. After weight gain is consistent, the patient is allowed brief scheduled walks around the unit with a staff member to help determine his or her caloric requirements to go home and to ensure continued progressive weight gain after discharge.

The goal is to create a treatment program during the hospitalization that the patient and parents can follow at home. As the parents become more comfortable with the meals, they are encouraged to support the patient to eat and to remain in the room with the patient between meals, replacing the staff member.

The role of the psychiatric consultant is to do the initial assessment, provide education, and build a working alliance between the family and the team. There is very little insight-oriented therapy attempted because of the patient's impaired mental status due to malnutrition and dehydration (see the article by Kazman et al. [9] for a review of cognitive dysfunction in adolescents with AN). In general, the rationale for inpatient and outpatient treatment recommendations is based on the impaired cognitive status of starved patients [9] and on the idea that child and adolescent patients will not be allowed to refuse a life-saving treatment (food), much in the same way as they would not be allowed to refuse a critical antibiotic for the treatment of an life-threatening infection. Prior to discharge, a family therapy lunch session or, if needed, multiple lunch sessions are held to correct dysfunctional family dynamics around eating and to ensure the patient's ability to eat with his or her parents prior to the transition to outpatient treatment. This intervention is described further in the outpatient treatment section.

At discharge, a meeting is held with the family to review the guidelines for the next phase of treatment at home. Discharge to home is dependent on improved medical status (ie, improved vital signs), overall improvement of eating patterns, and lack of other safety concerns (eg, suicidal ideation) that would necessitate a psychiatric inpatient admission. Prior to discharge, the nutritionist meets with the family to provide a sample menu of three meals and three snacks equal to the caloric value of the meals and supplements at discharge to maintain weight gain at home. To maximize the progress made in inpatient treatment and to minimize safety concerns, we prefer to have a same-day initial outpatient evaluation.

Outpatient Treatment

The first phase of outpatient treatment involves the medical necessity of continued weight gain upon discharge from the hospital. We support and encourage firm parental expectations and limits for the full recovery of the child. It is important for the family to realize that in addition to the family office sessions, the major therapeutic focus is at home during daily family meals. We often employ the use of the family therapy lunch session upon transfer to the outpatient setting, where it may be repeated as necessary. The lunch session is an opportunity for the therapist to directly observe the family's transactional patterns during eating, thus providing an opportunity to intervene in a therapeutic manner. Parents frequently feel helpless and impotent with regard to stimulating their child to eat. The therapist models concrete therapeutic interventions to support the parents to succeed in getting the child to eat. These interventions are transferred to the family meals at home. Parents are supported by clarifying that they were able to feed their child appropriately in the years prior to the onset of the eating disorder, and that what they desire for their child is for him or her to eat to regain appropriate health and resume childhood development. We frequently state clearly that "the illness is constituted by your daughter not eating what you want her to eat. The cure is to eat." Reinforcing this principle decreases self-defeating power struggles over eating. In this way, the illness is demystified and reframed into transactional, observable patterns of behavior between parents and child.

Upon initiation of outpatient treatment, the parents and/or the patient log food eaten, mood, activity, and disagreements with parents. Parents are instructed to monitor their child's activity at all times because no exercise is permitted. School attendance is initially not allowed because of the continued need for calorie conservation and is determined by the outpatient therapist as the patient demonstrates the ability to gain weight consistently while at home.

Because of the impaired cognitive status of the patient [9], parents are in charge of all aspects of food and eating. Parents are in charge of food preparation for all meals and snacks. The patient is not allowed to participate in the planning and preparation of meals and is not allowed to be in the kitchen or to go to the food market. The patient's only responsibility is to eat the meals and snacks as prepared and served by the parents. Bathroom observation and overnight monitoring are discussed with the parents and individualized to the patient's needs. Parents are asked to call the outpatient therapist after dinner every night for the first week to monitor and support the progress of the treatment plan on a daily basis before the next appointment. In addition, this process supports the family members to overcome their concerns and apprehensions consequent to the memories of severe difficulty with meals prior to hospitalization.

The initial focus of the treatment is behavioral change manifested by improved nutrition and weight gain. The patient and family are told that participation in preferred activities (eg, school, sports) is to be curtailed until sufficient weight gain has occurred. The explanation given is that good health manifested by adequate calorie intake and weight gain is necessary to participate in energy-expending activities from a logical perspective.

The meal plan should be simple and explicit. Because the patient was at normal weight before the onset of AN, the therapist emphasizes to the parents that they can resume their previous level of competent parenting. We favor a meal

plan with an adequate number of calories from protein and fat. If there are more complicated comorbidities, such as diabetes mellitus, the input of a medical nutritionist may be beneficial. We counsel the family and patient that many of the psychological symptoms coexistent with AN will be decreased as weight gain occurs, including symptoms of depression/anxiety, obsessive-compulsive disorder, and body image and self-image cognitive distortions [10–12]. In our opinion, this approach differs from individual psychotherapies aimed at uncovering underlying etiologic factors before weight gain has occurred, which can reinforce and perpetuate weight loss and malnourishment with prolongation of symptoms and duration of treatment.

The second phase of therapy begins with weight gain progressing on a weekly basis and the patient's return to school. At this point, the patient's responsibility for eating is increased with the parents' support and direction. As weight gain continues, he or she is able to engage in more activities, including exercise and sports. The rate at which this happens varies with the patient's and family's needs. Precipitant social stressors and psychosocial developmental issues acknowledged during the first phase of treatment are addressed. AN can delay psychosocial development. Therefore, it is important for the patient to re-engage in age-appropriate peer group relationships and activities. Other psychological symptoms, such as depression and anxiety, frequently emerge in this stage because restricting and compulsive exercise have decreased. Family issues that have occurred before and after the onset of the eating disorder need to be addressed. Comorbid psychiatric disorders, if they exist, such as anxiety, depression, and obsessive-compulsive disorder, are more clearly manifested once weight is restored [12]. Medications for these comorbid disorders can be considered depending on the intensity of the target symptoms.

The goal of the third phase of treatment is relapse prevention. Invariably, there are psychosocial stressors that impact on the patient and family system. These stressors need to be recognized and dealt with through appropriate coping mechanisms to prevent a regression to restricting and compulsive exercise. Individual age-appropriate issues are also given more focus. In our experience, it is a grave mistake to discontinue treatment before this phase of therapy is completed. Therapy sessions can be decreased in frequency as an indication to the patient and family of continued progress. In this phase of treatment, it may be necessary to schedule follow-up sessions that have 3 parts; first, the patient is seen alone to discuss individual issues; second, the parents join the session to discuss parent–child issues; finally, the parents are seen without the patient to discuss any relevant marital or family issues previously submerged or consequent to the eating disorder.

Currently, psychotropic medications are not indicated in the treatment of the acute cachectic phase of AN in children and adolescents because of compromised cardiac and renal function rendering them more vulnerable to complications and side effects, and lack of efficacy [13•, 14•, 15]. After normal weight and activities have been restored, medications may be indicated to decrease the intensity of symptoms of any comorbid conditions not related to AN. It is our opinion that the core primary treatment modality for acute AN in children and adolescents is family-based systems therapy.

Conclusions

The treatment of AN in children and adolescents often requires the involvement of multiple medical professionals across the stages of treatment, including pediatricians, nutritionists, and psychiatrists. The therapeutic strategies differ across treatment settings but share the ultimate goal of successful refeeding of the patient and improvement of psychosocial function. Initial nutritional and medical rehabilitation depend on a unified strategy in the inpatient hospital setting. The goal is medical stabilization and transition to the outpatient setting, where ongoing successful treatment relies on family therapy.

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