Prognosis

One half of patients with anorexia nervosa fully recovered after 21 years but the other half had a chronic or lethal course

Löwe B, Zipfel S, Buchholz C, et al. Long-term outcome of anorexia nervosa in a prospective 21-year follow-up study. *Psychol Med* 2001 Jul;31:881-90.

QUESTION: What is the long term course of anorexia nervosa?

Design

Inception cohort followed up for 21 years.

Setting

Community based study in Heidelberg, Germany.

Patients

84 women (mean age 21 y) meeting Feighner diagnostic criteria for anorexia nervosa with no severe somatic disorders. All women were identified while receiving inpatient treatment. At 21 years follow up, 70 patients were alive, of whom 63 (90%) completed the follow up interview.

Assessment of prognostic factors

Prognostic factors considered were selected based on the results of a previous 12 year follow up of these patients. Psychological, social, and medical data were collected.

Main outcome measures

Death; full and partial recovery; psychological and social outcomes; and change in outcome between 12 and 21 years follow up.

Main results

At 21 years follow up, 14 of the 84 patients (17%) had died; 12 due to causes directly related to anorexia nervosa (standardised mortality rate 9.8). When considering the 14 dead and the 63 living patients who were examined, 39 patients (51%) were fully recovered at 21 years follow up, 16 (21%) were partially recovered, and 8 (10%) still met full diagnostic criteria for anorexia nervosa. Social problems associated with a poor outcome were living alone (p for group differences <0.001), having no children ($p=0.03$), not being able to work ($p<0.001$), and lower mean Global Assessment of Functioning Scale score ($p<0.001$). Psychological problems associated with a poor outcome were having a mood disorder ($p=0.02$) and having a substance disorder ($p<0.001$). Of the 41 patients who showed a good outcome at 12 years of follow up, 30 maintained a good status at 21 years, 10 showed partial symptoms, and 1 fully relapsed. Of the 18 patients with partial recovery at 12 years, 9 achieved full recovery at 21 years, 5 maintained partial recovery, 2 fully relapsed, and 2 died. Of the 9 patients with a poor outcome at 12 years, 1 partially recovered, 5 maintained a poor status, and 3

died. A low body mass index (odds ratio [OR] 0.7, 95% CI 0.6 to 0.8) and a greater severity of social (OR 1.3, CI 1.1 to 1.4) and psychological problems (OR 1.3, CI 1.2 to 1.5) at 12 years were identified as predictors of a poor outcome at 21 years.

Conclusion

Approximately one half of patients with anorexia nervosa were fully recovered at 21 years but the other half had a chronic or lethal course.

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See: Approximately two thirds of adolescents with newly diagnosed eating disorders recovered within 5–11.5 years. *Evidence-Based Mental Health* 2001;4:59.

COMMENTARY

The 21 year follow up of anorexia nervosa by Löwe *et al* poses a critical challenge to mental health practitioners and researchers. Consistent with previous studies, the standardised mortality rate from anorexia in this study (9.8%) was consistent with prior observations of 5% per decade¹ and elevates anorexia nervosa to the status of most lethal of psychiatric disorders.² Moreover, even with intensive inpatient treatment and a variety of treatments during the follow up interval, still only half of patients achieved a good outcome. As noted previously,³ body mass index remained low in the partial and poor outcome groups even 21 years after admission. Continuing low weight predicts poor outcome over time underscoring the importance of achieving a healthy body weight. Recovery status was further complicated by the presence of depression, anxiety, and psychosocial adjustment problems.

This study also provides insight into how anorexia nervosa morphs over time. Bingeing and purging were nearly ubiquitous in the deceased and poor outcome cases. Many patients met cross-sectional diagnostic criteria for eating disorders not otherwise specified (ED-NOS) at 21 years. The natural history of anorexia reported here suggests that the maintenance of a restricting profile is rare and that bingeing and/or purging become almost inevitable as the duration of illness lengthens. This suggests that many cases of ED-NOS may represent an end state of anorexia nervosa rather than a separate and unique eating disorder. A richer conceptualisation of eating disorders diagnoses in terms of developmental stages of symptom expression is in order.

Although one could attempt to be optimistic by focusing on the 50% recovery rate in this sample, this would be unacceptable. Clearly we have not yet developed adequate psychopharmacological or psychotherapeutic interventions that effect cure for an acceptable number of individuals with anorexia nervosa. Given the high mortality associated with this disorder, we cannot afford to be complacent. Funds and creative research energy are desperately needed to discover new and effective treatments for anorexia nervosa.

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1 Sullivan PF. Mortality in anorexia nervosa. *Am J Psychiatry* 1995;152:1073–4.

2 Harris EC, Barraclough B. Excess mortality of mental disorder. *Br J Psychiatry* 1998; 173:11–53.

3 Sullivan PF, Bulik CM, Fear JL, et al. Outcome of anorexia nervosa: a case-control study. *Am J Psychiatry* 1998;155:939–46.