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Annotations

Depressive disorder in adolescence

Although adolescence has traditionally been considered a time of great turmoil and emotionality, most teenagers are generally happy individuals and serious depression is infrequent among the young. Nevertheless, over the past 15 years there has been growing concern about those adolescents who do develop major depressive conditions. Long term follow up studies suggest that severe cases have a high risk of recurrence extending into adult life¹ and are at increased risk of both attempted² and completed suicide.³ The public health importance of depressive disorder in adolescence is further underlined by the finding that over the past decade rates of suicide among young men have increased steadily.⁴ Many young suicides have suffered from depressive disorders.⁵

In this paper, a brief discussion of the clinical features and assessment of adolescent onset depressive conditions precedes a review of epidemiology, aetiology, and treatment. The general perspective that will be presented is that major depressive disorders can be a serious problem in adolescents and require careful assessment and intensive treatment.

Clinical picture and differential diagnosis

Depressive disorders in this age group are diagnosed using the same criteria as in adults. The central features are low mood, which does not improve substantially in circumstances where ordinary feelings of sadness would be alleviated, lack of enjoyment, and reduced energy. Pessimistic thoughts ('depressive cognitions') are important symptoms, and include feelings of hopelessness about the future, guilt about the past, and low self esteem. A group of symptoms, often called 'biological', are frequent and include sleep disturbance, loss of appetite and weight, and psychomotor retardation.

Depressed adolescents often suffer from a variety of other problems. For instance, around one fifth have a conduct disorder,⁶ and nearly a half have significant anxiety. These comorbid non-depressive symptoms may conceal depression, and there is often clinical uncertainty as to whether these mixed cases are better regarded as being primarily depressed or as having another psychiatric problem. Accurate diagnosis depends on assessment of the relative severity of depressive and non-depressive symptoms, and on the order in which they appeared.

Mild depressive disorders are sometimes difficult to distinguish from the negative affect that is quite frequent among many adolescents. Diagnosis depends on a careful search for other manifestations of depressive disorder, such as biological symptoms. The differential diagnosis should also include organic disorders and drug abuse, especially in patients who have no past history of emotional problems.

Aids to diagnosis

Assessment of depression in adolescents should start with a thorough evaluation of both depressive and non-depressive symptomatology; this will mean interviewing the adolescent alone. It is not enough to rely on accounts from parents as they may not notice depression in their offspring and may not even be aware of suicidal attempts. Unstructured clinical interviews with young people are, however, notoriously unreliable. Efforts to improve the reliability and validity of the diagnosis of depression have been directed at two main areas: (1) standardised diagnostic interviews and (2) biological tests.

Several structured interviews have been devised to standardise the assessment of the mental state of adolescents, and most of these have satisfactory psychometric properties.⁷ Indeed, researchers have virtually abandoned the unstructured interview as a diagnostic technique. Many teaching centres now incorporate structured interviews into their diagnostic work-up, and several of them offer training in the use of these interviews. It is likely that this trend will continue.

Psychobiological measures such as neuroendocrine tests have been less successful.⁸ The aim has been to develop a test that will reliably detect abnormalities of the pathophysiological systems that are thought to be involved in affective disorders. In general, however, such tests are only poor discriminators between depressed and non-depressed patients. Interpretation of positive results is often complicated by other factors such as admission to hospital or weight loss. They cannot therefore be recommended for routine use in clinical diagnosis.

Although the accurate diagnosis of depressive disorder is an important part of clinical management, it must be emphasised that the assessment of depression in young people only starts with the diagnosis, not stops with

it. Depressed adolescents usually have multiple problems, such as educational failure, impaired social functioning, and comorbid psychiatric disorders. All these problems need to be identified and the causes of each assessed.

Risk factors and epidemiology

Genetic factors account for a substantial amount of the variance in liability to bipolar illness in adults, but probably play a less substantial, though still significant, part in unipolar depressive conditions. Interest in the genetics of depressive disorders arising in adolescents has been stimulated by data from several sources. First, it seems that among adult samples, earlier age of onset is associated with an increased familial loading for depression.⁹ Second, the children of depressed parents have greater than expected rates of depression.¹⁰ Third, there are high rates of affective disorders among the first degree relatives of depressed adolescent probands. Moreover, there is some specificity in this linkage to the extent that the risk applies mainly to affective disturbances as opposed to non-affective disorders.¹¹

It will be appreciated that just because a disorder runs in families it does not follow that the linkages are mediated genetically. It is likely that family environmental factors are also important. For instance, discordant intrafamilial relationships seem to be strong predictors of the course of depressive disorders among the young.¹² Extrafamilial environmental factors, such as friendship difficulties and bullying, may also be relevant in this age group.¹³ There are likely to be bidirectional influences; depression and irritability can cause social isolation and even peer rejection.

Further clues about the aetiology of depressive disorder among the young come from its epidemiology. There is now good evidence that at some point during early adolescence there is an increase in the incidence of depressive disorder, particularly in girls. A variety of factors have been put forward to account for this increase, including cognitive maturation, sex hormones, and adverse life events. By the mid-teens the prevalence of major depressive disorder within community samples is around 2–3%, with a girl:boy ratio of 2:1.¹⁴

Psychological and biological mechanisms

The mechanisms linking these risk factors to the depressive mood state remain poorly understood. The most influential of the psychological models have been the so called cognitive theories, which were first developed with adult cases of depression. The main idea behind these theories is that depressed people develop a distorted perception of the world (such as the expectation that things will always go wrong), which is caused by earlier adversity, and which in conjunction with current adversity leads to depression. The occurrence of distorted negative cognitions has been documented in numerous studies of depressed young people,¹⁵ and cognitive theories provide a coherent explanation for the age trends and sex differences in depressive conditions that are found during adolescence. It is still not clear, however, whether they are a cause or a consequence of the disorder.

Biological theories have also consisted, for the most part, of straightforward downward extensions of models first developed with adult cases. The best known theory is the amine hypothesis, which proposes that depression is caused by underactivity in cerebral amine systems. This hypothesis arose from studies of adults in which it was found that drugs that alter cerebral amine concentrations,

such as imipramine, are also associated with changes in mood. Double blind controlled trials, however, have not established that tricyclics are effective in adolescent major depression.¹⁶ This finding casts some doubt on the validity of the amine hypothesis in child and adolescent depression, though the reasons for the failure of these trials are not well understood. Clearly, we require new hypotheses that take into account developmental changes in neurobiological systems.

Treatment

The initial management of depressed adolescents depends greatly on the nature of the problems identified during the assessment. This may indicate that the reaction of the teenager is appropriate for the situation. In such a case, and if the depression is mild, a sensible approach can consist of regular meetings, sympathetic discussions with the adolescent and the parents, and encouraging support. These general interventions, especially if combined with measures to alleviate stress or to help the family, are often followed by an improvement in mood.

In other cases a more focused form of intervention is necessary and referral to a child psychiatrist or psychologist may be required. Indications for referral include failure to respond to initial treatment, suicidal plans, marked social impairment (such as school non-attendance), severe biological symptoms, or comorbidity with other disorders such as behavioural problems.

The choice of a specific treatment for depression is determined by two main factors: (1) severity, and (2) developmental level of the adolescent.

Psychological interventions are the main first line treatment for depressions of moderate severity. Among the most promising of the extant treatments is cognitive behaviour therapy. Cognitive behaviour therapy involves *cognitive* interventions that aim to change the negative styles of thinking that were described above, and *behavioural* performance based procedures, which target observable behaviours such as social skills deficits. The purpose of both treatment components is to improve mood. Intelligent older adolescents will often benefit from the kinds of cognitive techniques that are used with adult patients, such as recording and challenging negative thoughts. Less able adolescents tend to do better with behavioural techniques, such as activity scheduling and social skills training.

Patients with severe depressions accompanied by biological features such as psychomotor retardation do not usually do well with psychological treatments alone. In these cases it is appropriate to add an antidepressant to the treatment programme. The effect of antidepressants is so well established in major depressive disorder in adults that there is still a case for using them in adolescents who show the same presentation as their adult counterparts. Tricyclic antidepressants are of course very toxic in overdose and so serotonin reuptake inhibitors such as paroxetine are probably the best first line treatment. Tricyclic antidepressants should be reserved for refractory cases, and may be augmented with lithium.

Although reduction of depression is a legitimate focus of treatment, it should not distract from the management of other problems, such as impaired peer relationships, conduct problems, family difficulties, or the adolescent's social situation.

Future prospects

Although most adolescents with major depression will recover within a year or so, they have a more than 50%

chance of another episode. It is therefore likely that future research on treatment will focus much more on the prevention of recurrence. The future also looks promising for the development of new treatments for the acute episode, such as interpersonal psychotherapy. Many of the older treatments, such as the serotonin reuptake inhibitors and cognitive behaviour therapy, require further controlled evaluation in clinical samples. The knowledge gained from the new generation of controlled studies should eventually be of great benefit to depressed adolescents and their families.

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- 1 Harrington RC, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression: I. Psychiatric status. *Arch Gen Psychiatry* 1990; 47: 465-73.
- 2 Myers K, McCauley E, Calderon R, Treder R. The 3-year longitudinal course of suicidality and predictive factors for subsequent suicidality in youths with major depressive disorder. *J Am Acad Child Adolesc Psychiatry* 1991; 30: 804-10.
- 3 Rao U, Weissman MM, Martin JA, Hammond RW. Childhood depression and risk of suicide: preliminary report of a longitudinal study. *J Am Acad Child Adolesc Psychiatry* 1993; 32: 21-7.
- 4 Harrington RC, Dyer L. Suicide and attempted suicide in adolescence. *Current Opinion in Psychiatry* 1993; 6: 467-9.
- 5 Marttunen MJ, Aro HM, Lonnqvist JK. Adolescence and suicide: a review of psychological autopsy studies. *European Child and Adolescent Psychiatry* 1993; 2: 10-8.
- 6 Harrington RC, Fudge H, Rutter M, Pickles A, Hill J. Adult outcomes of childhood and adolescent depression: II. Risk for antisocial disorders. *J Am Acad Child Adolesc Psychiatry* 1991; 30: 434-9.
- 7 Hodges K. Structured interviews for assessing children. *J Child Psychol Psychiatry* 1993; 34: 49-67.
- 8 Harrington RC. *Depressive disorder in childhood and adolescence*. Chichester: Wiley, 1993.
- 9 Strober M. Relevance of early age-of-onset in genetic studies of bipolar affective disorder. *J Am Acad Child Adolesc Psychiatry* 1992; 31: 606-10.
- 10 Radke-Yarrow M, Nottelmann E, Martinez P, Fox MB, Belmont B. Young children of affectively ill parents: a longitudinal study of psychosocial development. *J Am Acad Child Adolesc Psychiatry* 1992; 31: 68-77.
- 11 Harrington RC, Fudge H, Rutter M, Bredenkamp D, Groothues C, Pridham J. Child and adult depression: a test of continuities with data from a family study. *Br J Psychiatry* 1993; 162: 627-33.
- 12 Asarnow JR, Goldstein MJ, Tompson M, Guthrie D. One-year outcomes of depressive disorders in child psychiatric inpatients: evaluation of the prognostic power of a brief measure of expressed emotion. *J Child Psychol Psychiatry* 1993; 34: 129-37.
- 13 Goodyer IM, Wright C, Altham PME. Recent friendships in anxious and depressed school-age children. *Psychol Med* 1989; 19: 165-74.
- 14 Harrington RC. Affective disorders. In: Rutter M, Taylor E, Hersov L, eds. *Child and adolescent psychiatry: modern approaches*. 3rd Ed. Oxford: Blackwell Scientific, 1994: 330-50.
- 15 Vostanis P, Harrington RC. Cognitive-behavioural treatment of depressive disorder in child psychiatric patients. *European Child and Adolescent Psychiatry* 1994 (in press).
- 16 Harrington RC. The natural history and treatment of child and adolescent affective disorders. *J Child Psychol Psychiatry* 1992; 33: 1287-302.