Diagnosing and treating depression in childhood and adolescence

Identifying depression can be a difficult and daunting task for the GP, who must separate physical symptoms from psychological distress. The core features in children and adolescents are generally the same as those in adults, but may manifest with additional age-appropriate symptoms. This article discusses the diagnosis and treatment of depression in children and adolescents.

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Depression is a seriously underdiagnosed medical problem. Epidemiological data support a prevalence of 2 to 4% in children of the general population, which rises significantly after the onset of puberty. The prevalence in adolescent girls is higher than in boys.

Major depression carries considerable morbidity and mortality. The single most significant factor associated with attempted or completed suicide is a preceding depressive disorder. Depression is implicated in alcohol and illicit substance abuse: a young person may self-medicate with nonprescription drugs to alleviate depressive symptoms, and alcohol and illicit drugs are also associated with causing depression in the longer term.

Depressive symptoms range from mild to severe. In mild forms, depression can be a self-limiting condition associated with spontaneous remission; in more severe forms, it is associated with suicidal behaviour and psychotic symptoms. On average, more severe forms of uncomplicated adolescent depression run for seven months – longer if onset occurs in childhood or if suicidal ideas, a family history of an affective disorder or family dysfunction are present.

The condition is recurrent – child and adolescent depression predicts a higher risk of both

IN SUMMARY

- **Suicidal thoughts and plans are more common in adolescents than in younger children. Special care needs to be taken to enquire about these symptoms because often adolescents will not volunteer them.**
- **Depressed children under 13 years of age should not be medicated as the first line of treatment. Consider referral to a child psychiatrist or child mental health service.**
- **The selective serotonin reuptake inhibitors (SSRIs) are some of the most promising antidepressants for adolescent depression. Tricyclic antidepressants should be avoided in children and adolescents – they are dangerous in overdose, produce cardiotoxic metabolites in children and might cause arrhythmias.**
- **Cognitive behavioural therapy, which identifies patterns of maladaptive thinking which have led to depression in a young person, can be used by GPs trained in the technique.**

Figure 1. The key figure here is an unhappy, isolated girl on the edge of a cliff. She is separated from the other children by a gully and a fence. Her misery is accentuated by the others being happy at play and ignoring her.

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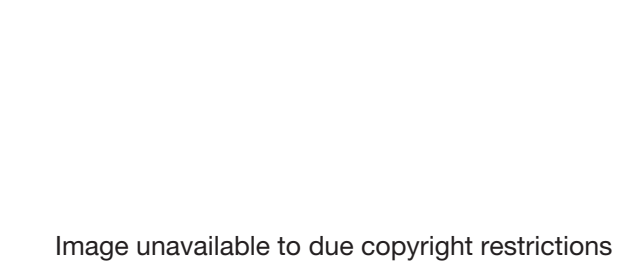

Figure 2. A lonely, miserable little girl isolated in a rainstorm.

depression and bipolar affective disorder in adult life. In significant depression, accompanying comorbidity tends to be the rule rather than the exception. The depressed child or teenager may also have a conduct disorder, an anxiety disorder or a substance abuse disorder.

Developmental considerations

The age at which a child, by definition, becomes an adolescent can be confusing. For the purposes of this article, a child is someone between birth and 18 years of age, and an adolescent is aged between 12 and 18 years.

A child can be depressed at any age from six months of life. Depression in children has the same core features as adult depression – the DSM-IV identifies the same symptoms for child, adolescent and adult depression (Table). However, irritability of mood is specific to childhood, and is equivalent in a child to lowered mood in an adult. Additional symptoms of depression in childhood are:

- failure to make expected weight gains
- diminished school performance
- unexplainable boredom
- social withdrawal
- recurrent or chronic physical symptoms without organic aetiology
- substance abuse
- unexplained aggression.

Clearly, depressive symptoms will vary and depend on the age and developmental stage of the child. The two most important developmental stages to consider are the primary school years and adolescence.

Table. Symptoms of major depression[1]

- Depressed or irritable mood
- Markedly diminished pleasure or interest
- Significant weight changes
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Fatigue
- Feelings of guilt or worthlessness
- Impaired concentration
- Suicidal thoughts, plan or attempt

Primary school years

Between the ages of 6 and 12 years, children develop the skills they need in order to:

- be praised
- appreciate the emotions and motivations of others
- assimilate the values of teachers, peers and others outside the family
- demonstrate concrete thinking.

Depressive symptoms can result from school failure, teasing or bullying, and from issues within the child's family. The depressed child can be presented by the parent as having abdominal pain, headaches or other recurrent problems without organic findings and may appear to be noticeably more anxious or clingy than previously, and is often irritable.

A deterioration in academic performance or a lack of interest in the child's own friends may be a symptom of depression. The child may be presented having had a suicide attempt or thoughts. Any child who attempts to hurt him- or herself with a self-harm gesture or suicide attempt is depressed until proven otherwise.

A child of primary school age will be presented as 'having a problem' by the parent. It is important to consider the source of the information when taking a history. A child, parent and school teacher may give varying accounts of the child's

symptoms. A simple rule of thumb is that the child is generally the best person to ask about internalising symptoms (anxiety or depression), and that the parent is the better historian on externalising symptoms (observable hyperactive or destructive behaviour). In practice, the medical practitioner needs to assimilate all sources of information.

Adolescence

The developmental tasks for an adolescent are:

- to separate from parents
- to begin to explore identity issues
- to negotiate early sexual relationships
- to harness and manage aggressive feelings
- to develop abstract reasoning.

Drug use may mask the manifestation of depression. Adolescent depression may also present as impulsive behaviour including binge eating, stealing, destructive behaviour or unprotected sex with multiple casual partners. The adolescent may be unusually moody or angry, or present with significant tiredness or headaches with vague stories of school or family stress.

It is not easy for adolescents to approach their medical practitioner independently – that is, without their parents' involvement. A depressed adolescent may present with a trivial 'ticket symptom' to see the doctor, while working up the courage to talk about what is really on his or her mind and trying to decide whether the doctor is the right person to tell problems to.

The presentation of adolescent depression differs significantly from that of adult depression. The depressed adult who is seen in the office will look sad, and the doctor will often find him- or herself feeling sad when talking with the patient. The doctor will notice that the mood of a depressed adult is generally lowered in a sustained way until the depression lifts. The depressed adolescent tends to have a much more reactive affect, which can be deceptive. A teenager who has just made a very serious attempt at suicide, and initially appears to be very sad at interview may then appear to be superficially happy an hour later; however, the patient's internal mood continues to remain low.

Suicidal thoughts and plans are more common in adolescents than in younger children. Adolescents are more likely to attempt or complete suicide. Special care needs to be taken to enquire about these symptoms because adolescents will not often volunteer them.

Psychotic symptoms may also be a feature of severe depression in young people. Often these involve mood congruent delusions, hallucinations, or excessive guilt.

The depressed adolescent might also create difficult medical and potential legal problems for medical practitioners. A 15-year-old teenager who is at risk but does not want the parents to know that he or she has depressive symptoms places the doctor at the crossroads of confidentiality and rapport-building while trying to involve the parents.

Assessment

The routine use of a brief screening instrument will help to alert the GP to the possibility of depression (see the box on this page). If depression is a possibility the doctor should:

- ask further questions about the symptoms of major depression
- ask about a past history of psychiatric illness
- enquire about depressive risk factors

Screening for depression*

Questionnaire

Read out the following statements, and ask the patient if each one is true or false:

1. Most days I feel sad.
2. I have lost interest in my favourite hobbies or activities.
3. I am irritable or grumpy most of the time.
4. I generally feel OK about myself.
5. I feel positive about the future.
6. I often feel worthless or guilty.
7. I feel like I don't have much energy.
8. I think about hurting myself.
9. I often find it difficult to sleep or I am sleeping more than usual.
10. My appetite or body weight has gone up or gone down a lot.

Scoring

- An answer of 'True' for any of the questions numbered 1 to 3 or 6 to 10 suggests that further exploration of the current mood is warranted.
- An answer of 'True' for any of the questions numbered 1 to 3, and three or more answers of 'True' for the questions numbered 6 to 10 suggest that the adolescent may be experiencing a level of depression that warrants intervention.

* ADAPTED FROM THE BERRIGA HOUSE DEPRESSION SCREENING QUESTIONNAIRE, WITH PERMISSION.

- perform a mental state examination.

Depressive risk factors

Frequently, depressed children have depressed parents. A family history of bipolar affective disorder or unipolar depression increases the genetic loading for a child. If the parent is currently depressed, the chance that the child will become secondarily depressed through the environment is increased. Depressed children are also more likely to have parents who are alcoholics or have a borderline personality disorder. A family history of suicide increases the risk of suicide for a child.

Biological factors are involved in depressed children. Children who are using or abusing substances are at risk of a drug-induced mood disorder. Children with chronic medical problems such as renal failure or diabetes are particularly vulnerable.

Psychological factors play a prominent role in the genesis of depression. High-achieving children with excessive workloads or unreasonable personal or parental expectations are at risk. Children are set up to become depressed if they tend to think in black and white terms – for example, 'I think I'm very clever, but if I get a C for this test, I'm very, very stupid'. Children with learning problems are another at-risk group.

Family factors also play a role in depression. Prominent risk factors are:

- childhood neglect
- physical, sexual and emotional abuse
- family dysfunction
- parental separation or divorce
- family bereavement.

Mental state examination

The most important part of the assessment is gaining rapport with the child. Consideration needs to be given to whether to see the child alone or with a parent. There are no guidelines, except perhaps to begin all together and then ask the child what he or she wants to do. It is important to keep in mind that the words you use should be within the vocabulary and understanding of the young person.

A simple question to gauge the depth of the depression is to ask the child to rate sadness today on the 'happy–sad scale' from 0 (very depressed) through 5 (average) to 10 (very happy). Also, asking the child what is the lowest number he or she has ever been, when that was, and what was happening at the time, often yields very useful information about what might be behind the symptoms. It is important to observe for symptoms of anxiety.

Particular attention needs to be directed towards eliciting symptoms related to suicidal thoughts, plans and attempts. Asking children if they have thought about suicide will not give them an idea they have not already had. Suggested questions include:

- Have you ever wanted to be dead?
- Have you had thoughts of harming yourself?
- Have you made any plans to harm yourself?
- Have you tried to hurt or harm yourself in the past?
- How close have you come to dying?

A single question may not be sufficient to unlock how suicidal a child really is. Asking about suicide needs to be in the context of exploring mood symptoms and genuine rapport.

Management

In making an assessment, GPs need to decide when to treat and when to refer.

Referral

A child under the age of 13 years should not be medicated as first line treatment. The following patients should be referred to a psychologist, child psychiatrist, or child or adolescent mental health service:

- a primary school child with moderate or severe depression
- an adolescent with severe depression
- a primary school child or adolescent with suicidal ideas, depression with comorbid psychiatric diagnoses or psychotic symptoms
- an adolescent not responding to antidepressant treatment in adequate doses and trial duration.

Antidepressants

Adolescents can be treated with antidepressants. The response rate in depressed teenagers is approximately 50%, which is somewhat less than the 70% response seen with medication in adult depression. The older adolescent is more likely to respond to medication.

The selective serotonin reuptake inhibitors (SSRIs) are some of the most promising antidepressants for adolescent depression. One double-blind study showed significant efficacy of fluoxetine (Auscap 20 mg Capsules, DBL Fluoxetine, Erocap, Fluohexal, Lovan, Prozac, Zactin) over placebo.[2] Given the safety of the SSRIs, they are frequently used as first line antidepressant agents in the primary care setting. Sertraline (Zoloft) and paroxetine (Aropax) have an advantage over fluoxetine (much shorter half-life and hence washout period) if the medication needs to be changed.

The rule of thumb is to use half the adult starting dose in the first week, and then increase to the full adult starting dose over the next week to two weeks, depending on side effects. The maximum adolescent dose is in the general range of half of the maximum adult dose, depending on response, side effects and body weight. For example, begin at sertraline 25 mg/day for a week, and then increase to 50 mg/day depending on side effects. If there is no response to sertraline 50 mg/day after several weeks, increase the dose to 75 mg and then, depending on residual symptoms, increase to a maximum of 100 mg per day. However, care must be taken because SSRIs (like the tricyclic anti-

depressants) may produce hypomanic or manic symptoms in patients with underlying bipolar affective disorder.

The response time for reduction in depressive symptoms is one to six weeks following commencement at therapeutic doses. A six-month period of maintenance antidepressant medication is recommended after a remission from a single episode of uncomplicated depression. Longer periods of prophylaxis are required for recurrent, severe or complicated depression.

Moclobemide (Arima, Aurorix) and venlafaxine (Efexor) are alternative antidepressants with efficacy in the adolescent population.

Tricyclic antidepressants should be avoided – they are dangerous in overdose, produce cardiotoxic metabolites in children and might cause arrhythmias. There have been several deaths associated with their use reported in the literature. Of the 12 randomised controlled trials of tricyclic antidepressants in depressed children, overall efficacy is identical to that of placebo.

Cognitive behavioural therapy

The psychological intervention of confirmed efficacy is cognitive behavioural therapy, an individual psychotherapy that identifies patterns of maladaptive thinking that have led to the depression.[3]

Initial treatment might focus on producing a diary of current behaviour and feelings. Gradually, the adolescent is made aware of his or her thinking and how it leads to depressive and anxious feelings. The young person is taught to use positive self-statements to counteract feelings of depression, and is gradually exposed to situations or thoughts that are increasingly anxiety or depression provoking.

Cognitive behavioural therapy also involves relaxation training to cope with overwhelming stress. The clinician teaches the young person how to relax the major muscle groups and control breathing when feeling anxious or sad. The adolescent is also taught to plan positive events and is engaged in activities that build positive self-esteem.

There are a number of cognitive behavioural therapy treatment packages suitable for use by trained GPs.[4]

Electroconvulsive therapy

Electroconvulsive therapy remains the most effective treatment for severe depression in adults. It has a role in adolescent depression for severe acute episodes that are refractory to pschotropic medication. Electroconvulsive therapy is also indicated when an adolescent is refusing oral antidepressants and is at significant risk of attempted suicide or dehydration (resulting from poor oral intake).

Assessment for electroconvulsive therapy should be performed in a specialist in-patient unit.

Concluding remarks

In some respects, the primary care physician has a more difficult task than the child psychiatrist in diagnosing depression in children and adolescents. A depressed child will often have had many assessments before reaching the specialist. It is imperative that GPs consider depression as an important differential diagnosis in assessing any child or adolescent. It is equally important to have a method of assessing, treating or referring patients in this at-risk group. MT

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