Delusional disorder

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INTRODUCTION

Delusional disorder is characterized in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR) as the presence of one or more delusions for a month or longer in a person who, except for the delusions and their behavioral ramifications, does not appear odd and is not functionally impaired [1]. Prominent hallucinations and other psychotic or marked mood symptoms are absent. Nonprominent hallucinations and odd behaviors related to the delusional theme may be present.

Delusional disorder is not well studied relative to other psychotic disorders, such as schizophrenia. Much of the information in the sections on epidemiology, course, and treatment is drawn from small samples or based on clinical experience. Longitudinal and population-based studies are needed to better characterize the disorder and clinical trials are needed to identify effective treatments.

This topic discusses the epidemiology, pathogenesis, clinical manifestations, course, diagnosis, and treatment of delusional disorder. Clinical manifestations, differential diagnosis, and initial management of psychoses are discussed separately. The epidemiology, pathogenesis, clinical manifestations, course, diagnosis, and treatment of delusional parasitosis, a delusional disorder of the somatic type, are also described separately. (See "Psychosis in adults: Epidemiology, clinical manifestations, and diagnostic evaluation" and "Delusional infestation: Epidemiology, clinical presentation, assessment and diagnosis" and "Treatment of delusional infestation".)

EPIDEMIOLOGY

Prevalence — The lifetime morbid risk of delusional disorder in the general population has been estimated to range from 0.05 to 0.1 percent [2-4], based on data from various sources including case registries, case series, and population-based samples. The epidemiology of delusional disorders has not been studied in large, community-based samples. These findings and the DSM-5 estimated lifetime prevalence of delusional disorder (0.2 percent) [1] are far lower than the estimated lifetime prevalence for other major psychotic disorders, such as schizophrenia (0.3 to 0.87 percent) and bipolar I disorder (0.24 to 0.6) [5]. Rates of delusional disorder reported in samples of patients receiving mental health treatment have ranged from 0.5 to 1.2 percent [2,6,7].

Attempts to quantify incidence estimates (0.7 to 3.0 out of 100,000) have been based on hospital admission data of uncertain accuracy [2].

Because a significant proportion of people with delusional disorder do not regard it as an illness or receive treatment and measurement often relies, to some extent, on self-report, studies likely underestimate the prevalence of the disorder.

Risk factors — Risk factors for delusional disorder include a family history of paranoid personality disorder and sensory impairment [3,4,8]. Studies have identified numerous sociodemographic and clinical factors that may be risk factors for delusional disorder but require further research [3,9-12]. A 2018 study of 455 persistent delusional disorder patients found depressive symptoms in 41 percent of study participants, a feature associated with a significantly younger age of onset [13].

Comorbid conditions — Small studies of patients with delusional disorder have found psychiatric comorbidity rates of 35 to 72 percent [14-17]. Depression has been the most commonly observed co-occurring condition, but anxiety can also be a significant factor [14]. As an example, in a study of 46 patients with a delusional disorder, 33 were found to have at least one other lifetime psychiatric diagnosis, most frequently a mood disorder [15]. Patients with the persecutory subtype were most likely to have a mood disorder.

Subtypes — The distribution of subtypes has been found to be similar in reports of several cohorts, with persecutory and jealous subtypes among the most common, and erotomanic and grandiose among the least [3,4,14,18,19]. (See 'Subtypes' below.)

As an example, a case registry study in Spain described 467 patients with delusional disorder, 56.5 percent female and a mean age of 55 years [11]. The distribution of subtypes in the sample

was as follows:

- Persecutory – 48 percent
- Jealous – 11 percent
- Mixed – 11 percent
- Somatic – 5 percent
- Not otherwise specified – 23 percent

Hallucinations were present in 16 percent of patients. Nine percent had a family history of schizophrenia. Forty-two percent had a co-occurring diagnosis of a personality disorder (mostly paranoid personality disorder). Depression was significantly more common among patients with persecutory and jealous subtypes. The mean Global Assessment of Functioning score was 51, suggesting low functionality among these individuals. Better functioning (reflected in higher scores on this rating scale in this sample) was seen among jealous and mixed cases compared with erotomanic and grandiose cases.

Features of delusional disorder subtypes are discussed in detail below. (See 'Subtypes' below.)

First episode cases — Studies comparing patients with first episode psychosis provide some evidence challenging previous views that delusional disorder cases exhibit better functioning than cases with schizophrenia:

- A comparison of demographic, clinical, and cognitive differences among 71 patients with first episode delusional disorder and 71 age-matched patients with first episode schizophrenia found that patients with delusional disorder had less evidence of premorbid schizoid and schizotypal traits, and were more likely to be married [20]. No differences between the two groups were detected in duration of untreated psychosis, pathways to care, symptom severity, neurocognitive performance, treatment, and functioning.

- A nested case-control study of 12-month outcomes among 1027 first episode psychosis patients included 48 patients with delusional disorder and 262 patients with schizophrenia cases. The study found that delusional disorder patients at baseline had a shorter duration of untreated psychosis and lower symptom scores and higher functioning compared with schizophrenia. At 12 months, the delusional disorder symptom score differences persisted but not overall function scores [21].

PATHOGENESIS

The pathogenesis of delusional disorder is not known. Lines of investigation have sought insight through study of:

- Risk factors such as individuals with sensory impairment, especially hearing or vision; isolated immigrant or linguistic group individuals; individuals with family history of suspiciousness and marked jealousy (see 'Risk factors' above)
- Delusions are common in many apparently distinct idiopathic psychopathological conditions, medical diseases, intoxications, and other conditions that can manifest delusions [4,22-24]
- Factors that appear to promote delusional thinking, such as reasoning biases, perception of threat, fatigue, and emotional distress [25]

Other evidence points to a genetic predisposition to a selective D2 receptor-related hyperdopaminergia and to dopamine neurotransmitter dysfunction investigations suggesting that delusional disorder may be a more purely D2-related psychotic condition than more common psychoses [26]. Another hypothesis proposes decreased striatal dopamine transporter functioning as a cause of primary and secondary cases of delusional parasitosis [27].

Findings of brain abnormality in the medial frontal/anterior cingulate cortex (considered to have a role in the pathogenesis of delusions) among 22 patients meeting the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria for delusional disorder suggest that further research may reveal an anatomy underlying this disorder [28].

CLINICAL MANIFESTATIONS

The clinical features of delusional disorder can be organized conceptually around a delusional concern or theme. Hallucinations, if present, are not prominent and are related to the delusional theme. Behavior unrelated to the delusion often is normal; functioning may be impaired, particularly if the delusional thinking is pervasive and chronic rather than episodic. Patients can appear to be functioning normally when not focusing on or being preoccupied by the delusional thinking. (See 'Subtypes' below.)

When they are preoccupied with delusional concerns, their emotional responses and actions are in accordance with their beliefs, as they seek solutions or information about their plight from varied sources, including dermatologists, lawyers, primary care clinicians, medical specialists, surgeons, the police, private detectives, or the courts, to find relief for their distress. They steadfastly refuse to characterize their beliefs as false and view opposing views with surprise, if

not hostility and disdain, dismissing or ignoring them, and continuing their struggle to find resolution or restitution for the wrongs they have endured or the illnesses from which they suffer.

They generally have no insight into their illness. They typically reject and often resent the suggestion that they are mentally compromised. They are a difficult group to engage clinically, often refusing to meet with a clinician about their delusions and/or to take medication. As examples:

- A patient has a false belief that he is being persecuted, conspired against, or potentially harmed. His actions are generally consistent with the delusional concerns (eg, taking a circuitous path to a destination to keep from being followed, taking surreptitious looks over the shoulder). The actions are well planned, executed, and carried out with emotional fervor and determined effort to protect against the actions of the suspected source.

- An individual with somatic delusions may not be particularly suspicious and may even be warm and emotionally less constricted. She may complain about her pains, somatic sensations, disappointments, and the frustration of not being treated or believed. She may focus on her appearance and its impact on her sense of well-being.

There may or may not be other, overt indications of psychopathology. Some minor emotional and behavioral features may be observable. Having a belief that others do not possess and actively oppose is understandably likely to generate guardedness, perhaps evasiveness in speaking with clinicians. Speech, motor tension, eye contact, and emotional reactions may be affected by the delusional thoughts.

In many cases there is not prominent suspicion, rather there may primarily be worry as in the somatic delusional individual described above. The patient's thinking and organization of behavior unrelated to the delusional concern is typically normal. Alternatively, careful examination may detect other characteristics of paranoid behavior, including suspiciousness, arrogance, complaining, belligerence, anger, hostility, and even violence.

In some cases, the patient may report dysphoric experiences, such as depressed mood or anxiety, heightened tension, or somatic sensations.

The traditional perspective of cognitive functioning in patients with delusional disorder is that the clinical mental status examination shows alertness, orientation, memory, and attention to be within normal limits (while insight and judgment related to the delusion were typically impaired). More recent research has suggested that subtle compromise in cognitive function may be present, particularly among those without a comorbid psychiatric disorder. This

cognitive impairment has been described as possibly similar to that seen in more common psychotic disorders such as schizophrenia [14]. As examples:

- Neuropsychological assessment found working memory dysfunction in nine patients with delusional disorder [29].
- A factor analytic symptom study reported an association between cognitive dysfunction and poorer global functioning in 86 outpatients with delusional disorder [30].
- The same group reported clear impairments in executive functioning and memory in 86 patients with delusional disorder [31].
- A study of 21 patients with delusional disorder reported social cognition deficits and changes in personality, albeit at levels less than those observed in schizophrenia [32].

Rates of suicidal ideation and behavior in patients with delusional disorder, based on several small studies, may be greater than in patients without psychiatric disorders and comparable to rates seen in patients with schizophrenia [33]. Individuals afflicted with persecutory and somatic delusions have been reported to be more likely than other subtypes to report suicidality.

A psychopathologic comparison between delusional disorder (n = 132) and schizophrenia (n = 143) concluded that delusional disorder is a milder, distinct disorder in terms of less severe psychopathology and better global functioning. Delusional disorder patients were older, more likely to be married, and had higher mean premorbid intelligence quotient than schizophrenia individuals. Schizophrenia patients had greater work-related disability [34].

COURSE

The age of onset of delusional disorder most often has been reported to occur in the 35 to 45 years range, but outliers have been reported between ages 18 to 80 years [4,6]. The onset of delusional disorder can be acute, even sudden, or less commonly the disorder develops gradually. An acute onset has been associated with the presence of a precipitating event [35]. Delusions are often the initial manifestation of the disorder, but premorbid traits, including odd behavior and personality changes, have been reported in some cases [36].

A commonly held view is that the course of the disorder is relatively persistent and stable; in fact, limited study suggests a more varied course. A study of 301 cases reported remission in approximately one-third of cases [35]. In approximately two-thirds of cases, the course of the disorder is lifelong, with delusions present continuously in some cases and periodically in

others [35,37]. The diagnostic stability of delusional disorder is less than that of some psychotic disorders; the most frequent change in diagnosis is to schizophrenia [38].

Delusional disorder is often a disabling illness. The condition often disrupts progress toward personal and occupational goals; patients with the disorder typically achieve less in their lives than their innate abilities would suggest. In our clinical experience, the course can be influenced by personal circumstances (eg, education, socioeconomic status, and physical health), the availability of personal support, and willingness to maintain treatment.

A study of 75 patients with diagnoses of delusional disorder and neurocognitive testing also indicated that verbal memory impairment and lower scores on executive functioning appear to affect functionality and self-perceived disability in delusional disorder beyond the severity of effects from the paranoid idea itself [39]. Delusional disorder can be a source of profound individual and familial suffering [40]. In cases of delusional jealousy and erotomania, the suffering can extend to other victims as well. Available data suggest that patients with delusional disorders have a better global outcome than patients with schizophrenia [10].

The avoidance of treatment by patients with delusional disorder is reflected in data showing lower rates of psychiatric outpatient treatment compared with patients with schizophrenia and bipolar disorders [3,41]. Lower hospitalization rates, rather than suggesting better clinical outcomes for patients with delusional disorder, may reflect a more isolated and subtler deterioration in functioning.

ASSESSMENT

A key part of the evaluation of delusional disorder is to assess the reality of delusional concerns. This can be challenging because patients with delusional disorder may appear functionally intact and describe beliefs with plausible content. Questions along these lines should be undertaken with diplomacy and sensitivity to the patient's reaction. Such exploration in the realm of the delusion may raise the possibility that the thinking is not delusional and may suggest alternative sources of the patient's suffering.

A detailed patient history, collateral history from key informants, and consideration of medical, substance-related, and other causes of delusions by physical and laboratory examinations are needed to work through the differential diagnosis of delusional disorder and potential co-occurring conditions. A thorough diagnostic evaluation and differential diagnosis of patients with psychosis are discussed separately. (See 'Comorbid conditions' above and 'Differential

diagnosis' below and "Psychosis in adults: Epidemiology, clinical manifestations, and diagnostic evaluation", section on 'Diagnostic evaluation'.)

A comprehensive and systematic mental status examination should be performed, including a thoughtful and thorough evaluation of the putative delusional thinking. Detection of some of the subtle cognitive impairments described earlier may require standardized assessments of memory, attention, intelligence, and executive functioning. (See 'Clinical manifestations' above.)

Suicidal and violent thinking as well as impulsivity should be carefully assessed, and inquiries directed toward past history to determine risk and how these experiences were dealt with.

DIAGNOSIS

Diagnosis of delusional disorder requires fulfillment of the DSM-5 criteria, below. Medical history (including substance use), physical examination, and laboratory testing are used to rule out medical causes of psychosis. No laboratory test can make the diagnosis of delusional disorder, but a detailed psychiatric history and examination can be used to distinguish delusional disorder from other mental disorders. The differential diagnosis is provided below. The differential diagnosis of psychosis is described in greater detail separately. (See "Psychosis in adults: Epidemiology, clinical manifestations, and diagnostic evaluation", section on 'Determining the etiology'.)

DSM-5 diagnostic criteria for delusional disorder are as follows:

- A. The presence of one (or more) delusions with a duration of one month or longer.
- B. Criterion A for schizophrenia has never been met.
  - Note: Hallucinations, if present, are not prominent and are related to the delusional theme (eg, the sensation of being infested with insects associated with delusions of infestation).
- C. Apart from the impact of the delusion(s) or its ramifications, functioning is not markedly impaired and behavior is not obviously bizarre or odd.
- D. If manic or major depressive episodes have occurred, these have been brief relative to the duration of the delusional periods.
- E. The disturbance is not attributable to the physiological effects of a substance or another medical condition and is not better explained by another mental disorder, such as body

dysmorphic disorder or obsessive-compulsive disorder.

Subtypes — The subtypes of delusional disorder are categorized by central themes of the delusions observed in patients meeting criteria for delusional disorder. Many case reports and papers characterize their distinctness as well as their connection to this group [3,4]. Each subtype can be primary (an idiopathic disorder that meets diagnostic criteria) or secondary (arising from specific causes, such as general medical illness). The delusional themes and common consequences are described below. In each case, the central belief should be thoroughly reviewed and found to be false.

Erotomanic type — The patient believes that another person is secretly in love with them. That person may be famous or have some kind of higher status, usually not part of the patient's social circle, and not likely to be attainable. Affected individuals may attempt to communicate with the object of their affection and attempt to meet them in person. Such effort can lead to stalking in some cases, with some risk for assaultive behavior. Expressions of love may be intense and rejections by the loved person interpreted oddly as affirmations of love to deflect suspicions or jealousy from the loved person's spouse. Other names include De Clerambault syndrome, erotomania, and psychose passionelle.

Grandiose type — The patient believes they have special prominence or talent, unusual fame, or major achievements. Features of the patient's thinking may suggest the grandiosity associated with mania, but in the delusional disorder, the mood disturbance and behaviors characteristic of mania are not present.

Jealous type — The delusional theme is the patient believes that a spouse or lover is unfaithful and finds "evidence" to support the delusion, accuses the spouse, and relentlessly tries to substantiate the offense. The delusion of jealousy can lead to aggressive, threatening, and possibly violent behavior, including homicide and suicide. In some cases, delusional jealousy and its disruptive impact may only improve through separation from the suspected unfaithful partner. Other names include pathologic or morbid jealousy, Othello syndrome, and conjugal paranoia.

Persecutory type — The patient is typically preoccupied by a delusion that they are being persecuted, conspired against, or potentially harmed. Their resulting actions are generally consistent with these concerns; they are well planned, executed, and carried out with emotional fervor and determined effort. These individuals may resort to the courts and even to violence to right the wrongs directed at them.

Somatic type — The patient believes that something awful is wrong with their body. There are several forms: that one is ill with undiagnosed disease; that one is infested with parasites or

insects (delusional parasitosis); or that parts of the body are misshapen, ugly, or emanate a foul odor. Individuals generally go from one doctor to another, specialist to specialist, usually disappointed by the failure to detect and diagnose the medical problem that haunts them. Suicide may be a risk, thought to be due to frustration and lack of effective clinical intervention. Other names include hypochondriacal delusion and monosymptomatic hypochondriasis.

The epidemiology, clinical presentation, diagnosis, and treatment of delusional parasitosis are discussed separately. (See "Delusional infestation: Epidemiology, clinical presentation, assessment and diagnosis", section on 'Epidemiology' and "Treatment of delusional infestation".)

Mixed type — No one delusional theme predominates.

Unspecified type — The dominant delusional belief cannot be clearly determined or is not described by the subtypes above.

Other notable differences between the DSM-IV and DSM-5 diagnostic criteria are a clearer demarcation of delusional disorder in DSM-5 from psychotic variants of obsessive-compulsive disorder and body dysmorphic disorder that is made explicit with a new exclusion criterion. Such a presentation must not be better explained by obsessive-compulsive or body dysmorphic disorder with lack of insight/delusional beliefs. Shared delusional disorder is no longer separated from delusional disorder as in DSM-IV. If the criteria for delusional disorder are met, delusional disorder is the appropriate diagnosis. If that diagnosis cannot be made yet shared delusional beliefs are present, the appropriate diagnosis is "other specified schizophrenia spectrum and other psychotic disorder."

Specifications — Specify if:

- With bizarre content – Delusions are deemed bizarre if they are clearly implausible, not understandable, and not derived from ordinary life experiences (eg, an individual's belief that a stranger has replaced their internal organs with another's without leaving a wound or scar).

Course specifiers – Only to be used after one year with the disorder:

- First episode, currently in acute episode – An acute episode is a time period in which the symptom criteria are fulfilled.

- First episode, currently in partial remission – Partial remission is a time period after a previous episode during which an improvement is maintained and defining criteria of the disorder are only partially fulfilled.

- First episode, currently in full remission – Full remission is a period of time after a previous episode during which no disorder-specific symptoms are present.
- Multiple episodes, currently in acute episode.
- Multiple episodes, currently in partial remission.
- Multiple episodes, currently in full remission.
- Continuous – Symptoms fulfilling the diagnostic symptom criteria of the disorder are remaining for the majority of the illness course, with subthreshold symptom periods being very brief relative to the overall course.
- Unspecified.

Current severity:

- Severity can be rated by a quantitative assessment of the primary symptoms of delusions, hallucinations, disorganized speech, abnormal psychomotor behavior, and negative symptoms. Each may be rated for its current severity (most severe in the last seven days) on a 5-point scale ranging from 0 (not present) to 4 (present and severe).
- Note: Diagnosis of delusional disorder can be made without using this severity specifier.

Differential diagnosis — The differential diagnosis of delusional disorder is highly important because the occurrence of delusional thinking has many sources, mostly secondary to other conditions; cases of primary delusional disorder are uncommon. Hence a practical principle is to detect or rule out other possible, usually more common, causes, before arriving at the diagnosis [4,23]. These include:

- Medical conditions (table 1)
- Medications (table 2)
- Substance-induced disorders (table 2)
- Other mental disorders, including schizophrenia and mood disorder

The clinical evaluation to rule out other causes of psychosis is described above. (See 'Assessment' above.)

Distinguishing features of delusional disorder include the absence of medical illnesses and medications causing psychosis, presence of delusions for at least one month, the absence of other positive symptoms of psychosis (except for hallucinations that are part of the delusional theme), the absence of functional impairment (except that related to the delusional theme), and

the absence of overlap (or overlap of a limited duration) between mood symptoms and the delusions [42]. Schizophrenia typically presents with a broader array of positive and negative symptoms and marked functional impairment for at least six months. In bipolar disorder and major depression with psychotic features, delusional thinking is typically accompanied by mania or depression. An algorithm (algorithm 1) depicts the diagnostic differentiation of psychosis.

A model has been developed to assess an individual with intense beliefs, possibly considered dangerous, and help determine whether the individual suffers from delusional disorder or is simply radicalized to extreme religious or political beliefs [43].

The differential diagnosis of psychosis is discussed in greater detail separately. (See "Psychosis in adults: Epidemiology, clinical manifestations, and diagnostic evaluation", section on 'Diagnostic evaluation'.)

TREATMENT

Importance of a therapeutic relationship — Delusional disorder patients often see themselves as discriminated against and not believed. They may present as angry, hostile, and uncooperative. The patient may feel their concerns are invalidated, and meeting a clinician may only lessen their willingness to engage in treatment. Lack of insight and trust complicate matters further. Thus, initial encounters may be awkward and even tense and the patient may reject psychiatric treatment initially. In response, the clinician should listen and empathize with the patient's distress. This approach and considerable diplomacy are required to establish the relationship. Steadiness and patience are also essential to make an alliance possible.

It is particularly important that treatment be within the context of a therapeutic relationship that includes support, alliance building, education, encouragement of healthier pursuits, and discouragement of delusion-inspired behaviors. It may be useful to engage family members and social supports in order to reinforce treatment goals, review side effects of medications, and enhance the therapeutic relationship.

Clinicians may be able to engage patients by clarifying that the therapeutic objective is to relieve the unpleasant preoccupations and isolation that are associated with responding to delusional concerns rather than eliminate the delusion. Identification of co-occurring psychiatric disorders may also help the clinician engage a patient with delusional disorder, as the patient is more likely to discuss and receive treatment for anxiety or depression, rather than for the delusion [44]. If the comorbidity can be effectively managed, the patient may be more inclined to participate in treatment for the delusion.

Antipsychotic therapy — We suggest first-line treatment of delusional disorder with antipsychotic medication rather than other clinical interventions. We typically use antipsychotics with adjunctive psychotherapy; if patients refuse or cannot tolerate antipsychotic medication, we use psychotherapy alone. (See 'Adjunctive psychotherapy' below.)

Treatment of patients with delusional disorder with antipsychotic medication requires careful effort because patients often deny the illness and suspect the motives for pharmacologic intervention. The clinician needs to address the concerns of and foster a working alliance with the patient. It is particularly important to provide the patient with information about how the medication may be useful, what symptoms are targeted, possible side effects, and the anticipated length of treatment. Even a begrudging or halfhearted agreement by the patient to take the medication is an important first step. Patients may need to experience improvement on a medication before expressing some acceptance of the treatment. Side effects are very likely to evoke refusal to continue medication. If the patient refuses antipsychotic medication or if it is prematurely discontinued, actions to further enhance the therapeutic relationship may be helpful.

In our clinical experience, treatment of delusional disorder with antipsychotic medication does not result in the disappearance of delusions; rather, they become less important to the patient, or more tentatively accepted as true, permitting other more normal life pursuits to proceed. (See 'Importance of a therapeutic relationship' above.)

Choice of medication — We generally use a second-generation antipsychotic with a more favorable side effect profile. As an example, aripiprazole can be started at 2 to 5 mg per day and gradually increased over several days or weeks to 10 to 20 mg per day while monitoring for clinical response. Once a therapeutic dose is achieved, we allow one to two weeks at that dose before evaluating the effect and need for further dose increase or medication switch.

For patients who have difficulty with adherence, long-acting injectable antipsychotic formulations are a reasonable alternative to oral medications [45].

Clozapine, a second-generation antipsychotic indicated for treatment resistant psychosis, may be an appropriate alternative intervention when the patient has depression and is a high suicide risk [46,47]. Based on evidence from limited case series, its success rate is similar to other agents. Caution is advised in using clozapine due to its toxicity. (See "Evaluation and management of treatment-resistant schizophrenia" and "Schizophrenia in adults: Guidelines for prescribing clozapine".)

There are no randomized clinical trials of antipsychotic medications in patients with delusional disorder. Retrospective studies of treated cases have reported substantial but widely varying

response and remission rates [9,46,48-50]. As an example, in a large, retrospective study of 455 patients with acute delusional disorder, olanzapine and risperidone were associated with a good response in >52 percent, with >80 percent adherence [13]. In two reviews of case series of 134 and 209 patients with delusional disorder, 81 to 90 percent reported improvement or response with antipsychotic medications and 49 to 69 percent reported near total remission of symptoms at follow up [9,46].

Reductions in delusional symptoms have been described with both first- and second-generation antipsychotic medications, although most early studies evaluated first-generation antipsychotics, such as pimozide [48-50]. It is not clear that any particular antipsychotic agent is more effective than others [46]. Although one review of observational studies suggested higher rates of good response with first-generation antipsychotics than second-generation agents (39 percent of 208 patients versus 28 percent of 177 patients), it is unclear whether this potential difference in efficacy outweighs the greater long-term toxicities associated with first-generation antipsychotics [51].

Response to medication and length of treatment — If the patient responds to medication treatment, we typically continue antipsychotic medications for a prolonged duration, potentially years. The decision to stop antipsychotics should be individualized and depends on the severity of delusions and their consequences as well as the potential toxicities of the medications. The pharmacology and side effects of antipsychotic medications are described separately. (See "Second-generation antipsychotic medications: Pharmacology, administration, and side effects" and "First-generation antipsychotic medications: Pharmacology, administration, and comparative side effects" and "Schizophrenia in adults: Maintenance therapy and side effect management", section on 'Side effect management'.)

If there is negligible or suboptimal symptom improvement after four weeks of medication treatment, we typically switch to a different second-generation antipsychotic. If the patient has similarly suboptimal response to the second agent, we check a plasma drug level to determine adherence and achievement of appropriate levels. Plasma levels are a useful and often overlooked, objective option to monitor treatment [52,53]. A meta-analysis of methods for measurement of antipsychotic adherence in delusional disorder indicated higher rates of adherence using objective methods (eg, antipsychotic plasma levels at four weeks) over subjective methods [54].

Adjunctive psychotherapy — We suggest psychotherapy as an adjunct to antipsychotic therapy. For those patients who cannot tolerate or refuse antipsychotic treatment, psychotherapy is generally administered alone. Cognitive-behavioral therapy (CBT) and supportive therapy have been suggested for the disorder, though there have been few clinical

trials of specific psychosocial interventions [3]. The choice of therapeutic strategy is based on patient's desire for and willingness to engage in therapy. Additionally, the patient's capacity to utilize therapy in a productive manner must be considered. Involvement of family members in therapy may also be useful in either therapy.

- **Cognitive-behavioral therapy** – CBT has been adapted to treat psychotic disorders, principally schizophrenia. The aim is to identify and address features believed to be associated with delusions, such as data gathering biases, interpersonal sensitivity, reasoning style, worry, and insomnia. Discussion and critique of the patient's explanations for delusional ideas are practical techniques aimed at breaking down the certitude and emotional underpinnings that maintain the idea. (See "Schizophrenia in adults: Psychosocial management", section on 'Cognitive-behavioral therapy'.)

  Evidence for use of CBT in delusional disorder is limited to case reports and a randomized clinical trial of 24 patients, which showed a positive impact on delusional thinking with CBT compared with attention placebo control [55-59].

- **Supportive psychotherapy** – In supportive psychotherapy, the clinician attempts to gain insight into the often painful quality of the experiences with delusional disorder and connect with the patient through empathy and suggestions aimed at reducing discomfort. As the demands of supportive therapy are somewhat less than CBT, supportive therapy may be useful for patients with reduced motivation or with an intellectual disability. For patients who deny that their concerns are delusional, a verbally supportive strategy intended to ease distress may be helpful. (See "Overview of the therapeutic relationship in psychiatric practice".)

Involuntary treatment for select patients — Involuntary treatment with antipsychotic medication may have a role in the treatment of a patient with delusional disorder at serious risk of harming oneself or others. Clinical decisions about involuntary treatment are subject to legal regulations that vary by country and locality.

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Psychotic disorders".)

SUMMARY AND RECOMMENDATIONS

- **Delusional disorder** – Delusional disorder is characterized by the presence of one or more delusions with a duration of a month or longer in a person who, except for the delusions and their behavioral ramifications, does not appear odd and is not markedly functionally impaired. Prominent hallucinations and other psychotic or marked mood symptoms are absent. (See 'Introduction' above and 'Diagnosis' above.)

- **Epidemiology** – The epidemiology of delusional disorders has not been studied in sufficiently large, community-based samples to provide persuasive estimates of its incidence or prevalence. The lifetime prevalence estimated at 0.2 percent. This is less than the estimated lifetime prevalence of other major psychotic disorders such as schizophrenia and bipolar disorder. (See 'Epidemiology' above.)

- **Comorbid conditions** – Studies of patients with delusional disorder have found psychiatric comorbidity rates of 35 to 72 percent. Depression has been the most commonly observed co-occurring condition, but anxiety can also be a significant factor. (See 'Comorbid conditions' above.)

- **Subtypes** – Subtypes of delusional disorder include erotomanic, grandiose, jealous, persecutory, somatic, mixed, and unspecified types. Delusional parasitosis, a somatic subtype, is discussed separately. (See 'Subtypes' above and "Delusional infestation: Epidemiology, clinical presentation, assessment and diagnosis".)

- **Clinical manifestations** – Individuals with delusional disorder typically reject the characterization of their beliefs as false and continue seeking to find help with the objects of their delusions. They generally have no insight into their illness. They often refuse to see a mental health clinician and usually reject antipsychotic medication, making treatment challenging. (See 'Clinical manifestations' above.)

- **Course** – The onset of delusional disorder can be acute or sudden. Less commonly the disorder develops gradually. The course of the disorder varies among those afflicted, with perhaps one-third experiencing remission and two-thirds a prolonged course. In the latter group, delusions can be present continuously or periodically. (See 'Course' above.)

- **Assessment** – A detailed patient history and collateral history from key informants are critical for making the diagnosis of delusional disorder. We are vigilant to consider medical and other causes of delusions by physical and laboratory examinations. We perform a comprehensive and systematic mental status examination, including a thoughtful and thorough evaluation of the putative delusional thinking. (See 'Assessment' above.)

- **Treatment** – We suggest both antipsychotic medication and adjunctive psychotherapy for patients with delusional disorder (**Grade 2C**). Among the antipsychotic medications, we suggest a second-generation antipsychotic (eg, aripiprazole or ziprasidone) rather than a first-generation antipsychotic medication (**Grade 2C**). Because patients with the disorder often reject psychiatric treatment, it is particularly important that medication be prescribed in the context of a therapeutic relationship that includes support, education, encouragement of healthier pursuits, and discouragement of damaging, delusion-inspired actions. (See 'Treatment' above and 'Antipsychotic therapy' above.)

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