

Psychotic and in pain

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Mrs. P, age 58, has a history of depression, suicide attempts, and chronic pain. Eight months ago she developed psychotic symptoms. How would you treat her?

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CASE Depressed and delusional

Mrs. P, age 58, is a retired art teacher who presents for inpatient psychiatric admission after an 8-month depressive and psychotic illness. She reports profound feelings of worthlessness, anhedonia, psychomotor retardation, daily spontaneous crying spells, and worsening suicidal ideation. She is unkempt, disheveled, and makes limited eye contact. She is floridly psychotic, exhibits hebephrenia at times, and appears to be having conversations with people who are not there. Mrs. P reports derogatory intracranial auditory hallucinations of her brother's and father's voices. She also describes a complex delusional system relating to sexual trauma she experienced as a child perpetrated by her brother. Her family corroborates some details of the trauma; however, she says her father, neighbors, pastor, and outpatient psychiatrist are involved. Mrs. P believes these individuals are members of a cult, she has been the victim of a satanic sexual rite, and a television news personality knows about this conspiracy and has been attempting to contact her.

Mrs. P suffers from severe, debilitating chronic pain experienced as shock-like pain lasting for several minutes that starts in her throat and radiates to her left ear. Her pain began several years ago and prompted a neurologic workup, including MRI of the head

and somatosensory evoked potentials of the glossopharyngeal nerve. She was diagnosed with "probable" glossopharyngeal neuralgia and failed multiple medication trials, including carbamazepine, phenytoin, gabapentin, and amitriptyline. She underwent microvascular decompression surgery 3 years ago. The operation, which has an 80% to 90% success rate for neuralgias,^{1,2} offered only brief symptomatic relief. She was maintained on immediate-release opiates until the pain became "unbearable" 8 months ago. This prompted a second neurologic workup, which was unremarkable. Mrs. P was diagnosed with pain disorder associated with psychological factors and a general medical condition.

Ten years ago she had 2 major depressive episodes with inpatient hospitalization and 2 suicide attempts within 1 year, but no history of psychosis before 8 months ago. Mrs. P's husband says his wife has no history of manic or hypomanic episodes. Her medications are ziprasidone, 20 mg/d, thiothixene, 10 mg/d, benztropine, 3 mg/d, and escitalopram, 30 mg/d. She also receives oxycodone/acetaminophen, 5 mg/325 mg as needed for facial pain and headaches, and clonazepam, 1 mg as needed for panic attacks.

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Which disorder is most likely comorbid with Mrs. P's pain disorder?

- a) bipolar I disorder, most recent episode depressed with psychotic features
- b) brief psychotic episode
- c) substance-induced psychotic disorder
- d) major depressive disorder (MDD), recurrent, severe with psychotic features
- e) schizophrenia

The authors' observations

Psychosis can be a feature of any of the disorders listed in *Table 1*³; however, several features of Mrs. P's illness led us to diagnose MDD, recurrent, severe with psychotic features.⁴ Mrs. P and her husband described several discreet episodes of major debilitating depression without alternating periods of hypomanic or manic symptoms (*Table 2, page 66*).⁴ Comorbid depressive symptoms and a timeline indicating persistence of psychotic symptoms make a brief psychotic episode less likely. Although uncommon, patients can develop psychotic or mood disorders as a result of opiate abuse or dependence. However, Mrs. P was taking opiates as prescribed and not asking for early refills, which makes substance abuse an unlikely cause of her psychosis. In addition, because Mrs. P had 2 major depressive episodes in the absence of opiate use, a primary mood disorder seemed the more appropriate diagnosis. Schizophrenia is ruled out based on history. Although Mrs. P was suffering from complex delusional constructs, auditory hallucinations, and grossly disorganized behavior, these symptoms occurred only within the context of her depressive episode. New-onset delusional guilt relating to her childhood sexual trauma and hypochondriacal preoccupations within the context of pain complaints make psychotic depression more likely.⁵

Depression, psychosis, and pain

From the beginning of Mrs. P's treatment, we considered psychotic depression wors-

Table 1

Psychiatric diseases in which patients may present with psychotic symptoms

Bipolar depression
Borderline personality disorder
Brief psychotic disorder
Delirium
Delusional disorder
Dementia
Major depressive disorder
Psychotic disorder due to a general medical condition
Schizoaffective disorder
Schizophrenia
Shared psychotic disorder
Substance-induced psychosis
Source: Reference 3

ened—if not completely explained—her pain. Her somatic complaints appeared to be subtly woven into her delusional constructs. For instance, she complained that a device had been implanted in her head and she had the scar to prove it, pointing to the scar from her microvascular decompression surgery. Research indicates that depressive illness and chronic pain syndromes are highly comorbid and depressive illness can worsen pain syndromes.^{6,7} In addition, Mrs. P failed several medical and 1 surgical interventions for her pain condition that had high success rates. Her husband notes that when her outpatient psychiatrist started olanzapine 3 months ago for emerging psychotic symptoms, her pain complaints initially decreased with her psychotic symptoms, and she used less opiate medication during that time. Several months later Mrs. P's pain complaints increased as her psychotic symptoms worsened. Second-generation antipsychotics have been evaluated as treatment for chronic pain syndromes, and may exert a primary analgesic effect.^{8,9} However, because of the correlation be-

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Depressive illness and chronic pain are highly comorbid and depressive illness can worsen pain syndromes

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Treatment strategies for psychotic depression include antidepressants, antipsychotics, lithium augmentation, clozapine, and ECT

Table 2

DSM-IV-TR criteria for major depressive episode

A. ≥5 of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either 1) depressed mood or 2) loss of interest or pleasure
1) depressed mood
2) markedly diminished interest or pleasure
3) significant weight loss or gain
4) insomnia or hypersomnia
5) psychomotor agitation or retardation
6) fatigue or loss of energy
7) feelings of worthlessness or excessive or inappropriate guilt
8) diminished ability to think or concentrate, or indecisiveness
9) recurrent thoughts of death or recurrent suicidal ideation
B. Symptoms do not meet criteria for a mixed episode
C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning
D. The symptoms are not due to the direct physiological effects of a substance (eg, a drug of abuse, a medication) or a general medical condition (eg, hypothyroidism)
E. The symptoms are not better accounted for by bereavement, ie, after the loss of a loved one, the symptoms persist for >2 months, or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation
Source: Reference 4

tween her fluctuating psychotic symptoms and pain complaints, the more plausible explanation for olanzapine’s initial efficacy in treating Mrs. P’s pain is a secondary analgesic effect from decreased psychotic somatic preoccupation.

How would you manage Mrs. P?

- a) maximize the dose of a selective serotonin reuptake inhibitor (SSRI) and an atypical antipsychotic as an outpatient
- b) maximize the dose of an SSRI and atypical antipsychotic with lithium augmentation as an inpatient
- c) inpatient electroconvulsive therapy (ECT)
- d) switch to a tricyclic antidepressant plus clozapine as an inpatient

TREATMENT ECT

Mrs. P is admitted to the inpatient psychiatric unit and placed on suicide precautions. Oxycodone/acetaminophen and clonazepam are tapered and limited to twice daily as needed. Escitalopram is tapered and discontinued.

Thiothixene is tapered and replaced by olanzapine, 5 mg/d. Mrs. P receives 3 bifrontal, brief pulse-width ECT treatments. These result in marked improvement in her depressive and psychotic symptoms. In addition, her pain complaints become minimal. She becomes less preoccupied with her sexual trauma and grows to trust many staff members whom she previously believed were part of her traumatic childhood events. Mrs. P is no longer suicidal and asks to continue ECT treatments as an outpatient. She is discharged on olanzapine, 5 mg/d, trazodone, 100 mg/d for insomnia, benztropine, 2 mg/d, clonazepam 0.5 mg twice daily as needed for panic attacks, and oxycodone/acetaminophen, 5 mg/325 mg twice daily as needed for pain.

The authors’ observations

According to the Harvard South Shore Algorithm, treatment strategies for psychotic depression include antidepressant and antipsychotic combinations, lithium augmentation, clozapine, and ECT.¹⁰ Several factors made ECT the best option for Mrs. P.



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continued from page 66

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ECT has demonstrated efficacy for treating pain secondary to psychotic depression or melancholic depression

Related Resources

- Schreiber S, Shmueli D, Grunhaus L, et al. The influence of electroconvulsive therapy on pain threshold and pain tolerance in major depression patients before, during and after treatment. *Eur J Pain.* 2003;7(5):419-424.
- Suzuki K, Ebina Y, Shindo T, et al. Repeated electroconvulsive therapy courses improved chronic regional pain with depression caused by failed back syndrome. *Med Sci Monit.* 2009;15(4):CS77-CS79.
- Giesecke T, Gracely RH, Williams DA, et al. The relationship between depression, clinical pain, and experimental pain in a chronic pain cohort. *Arthritis Rheum.* 2005;52(5):1577-1584.

Drug Brand Names

Amitriptyline • Elavil	Lithium • Eskalith, Lithobid
Benzotropine • Cogentin	Olanzapine • Zyprexa
Carbamazepine • Tegretol	Oxycodone/ acetaminophen • Vicodin
Citalopram • Celexa	Phenytoin • Dilantin
Clonazepam • Klonopin	Thiothixene • Navane
Clozapine • Clozaril	Trazodone • Desyrel, Olepro
Escitalopram • Lexapro	Ziprasidone • Geodon
Gabapentin • Neurontin	

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Dr. Kugler reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

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She had failed multiple treatment strategies and was suicidal. ECT is an effective treatment for MDD with psychotic features, single or recurrent episode.¹¹ ECT can be used as a primary treatment before psychotropic medications or secondarily when there has been lack of clinical response to medications, intolerable side effects, deterioration in psychiatric condition, or suicidality.^{11,12} In addition, when treated with ECT, psychotic depression has a significantly higher remission rate than major depression without psychosis.¹² Delusional guilt, psychomotor retardation, hypochondriacal preoccupations, loss of insight, paranoia, and obsessive-compulsive symptoms predict a favorable response.¹² ECT also has demonstrated efficacy for treating pain secondary to psychotic depression or melancholic depression.¹³ In addition, ECT has been shown to have analgesic properties beyond treating underlying depression.¹⁴ Our primary focus was not to treat Mrs.

P's pain syndrome with ECT; however, in treating her psychotic depression we had hoped that her pain tolerance would improve and she would rely less on opiates.

OUTCOME Pain relief

As an outpatient, Mrs. P receives 11 bifrontal ECT treatments in her initial series, followed by 7 bifrontal maintenance treatments. Her speech is more spontaneous, her grooming and hygiene improve, and she exhibits a brighter and more reactive affect. Suicidal ideation has resolved. Pain improves from a "10 out of 10" to a "2 out of 10." Mrs. P consistently requires less oxycodone/acetaminophen. She relates better to her family and begins exploring new hobbies such as pottery. In addition to monthly maintenance bifrontal ECT treatments, she is stable on citalopram, 60 mg/d, and trazodone, 50 mg/d as needed for insomnia.

What likely explains the improvement in Mrs. P's pain complaints?

- effective treatment of depressive illness, leading to improved emotional perception of pain
- analgesic properties of ECT decreased her pain
- effective treatment of depressive illness has unmasked pain-relieving benefits from her microvascular decompression surgery
- all of the above

The authors' observations

The relationship between depressive illness and chronic pain is complex. Treating a primary depressive illness can lead to improved functional outcomes and decreased disability from chronic pain complaints.¹⁵ Patients with comorbid chronic pain and depressive illness are more likely to suffer from unremitting pain despite compliance with evidence-based treatment strategies.¹⁶ Mrs. P had 2 co-occurring disorders: psychotic depression and chronic pain disorder secondary to glossopharynx-

geal neuralgia. Our opinion is that Mrs. P's psychotic depression worsened her experience of pain.

Treatment strategies that address both depressive symptoms and chronic pain are ideal.¹⁷ These treatment modalities include psychotherapeutic techniques such as cognitive-behavioral therapy, medications, and somatic treatments such as ECT.¹⁸ In Mrs. P's case, ECT was an effective treatment that caused remission of psychotic depressive symptoms, which lead to improved pain control and restored social and occupational functioning.

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Treating a primary depressive illness can lead to improved functional outcomes and decreased disability from chronic pain

Bottom Line

Electroconvulsive therapy (ECT) is a treatment option for patients with psychotic depression and unremitting pain secondary to psychological factors. ECT can ameliorate both mood symptoms and the emotional experience of pain, thereby improving pain tolerance and quality of life.