al states and possible effectiveness in refractory psychosis.[5]

Other unique properties of pimozide that have been reported in the literature — calcium channel blocking ability,[5] lack of noradrenergic receptor blockade,[5] little or no presynaptic dopaminergic blocking effect,[5,6] differential modulation of D_2 dopamine receptors[6] — may have contributed to improvement in the patient's negative symptoms and tardive dyskinesia.[5,6]

Research on pimozide has largely been neglected since the early 1980s, due to the arrival of atypical agents. A combination of a multireceptor-acting drug, such as olanzapine,[7] and a unique primary D_2 blocker such as pimozide[8] may well be justified for a subcategory of patients. However, one cannot ignore the inherent complications involved with combining antipsychotic therapy, such as increased risk of movement disorders and other endocrine effects. It is noteworthy that most of these complications are heterogeneous. The most powerful predictors are potency and dose of the drug, and rate of titration.[9,10]

The possible complications can be reduced by first considering factors such as potential for drug interactions, potency of agent, low therapeutic dose, gradual titration, as well as ruling out complicating medical conditions before initiating combination therapy.

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Light-therapy-induced hot flushes in a patient with seasonal affective disorder

Dear Sir:

Light therapy is the treatment of choice for seasonal affective disorder (SAD), a condition characterized by regularly recurring winter depressions alternating with nondepressed periods in spring and summer.[1] Two previous case reports have described a relation between light therapy and hot flushes in female patients with SAD.[2,3] Labbate and Sachs[2] reported light-therapy-induced hot flushes in a postmenopausal patient with SAD, and Turner and colleagues[3] used light therapy to successfully treat a perimenopausal patient with SAD who complained of hot flushes during fall and winter. We present a third case showing a relation between light therapy and hot flushes, this time in a premenopausal patient with SAD.

A 35-year-old woman reported depressed mood, loss of energy, hypersomnia, carbohydrate craving, increased appetite and weight gain. She had no other psychiatric or medical disorders, and she received no medication during treatment. She had a regular menstrual cycle and was experiencing no perimenopausal symptoms. The patient used a 10 000 lux light box for 45 minutes both in the morning and in the evening. Three days after starting therapy, her condition improved as evidenced by her waking up earlier in the morning and feeling more energetic, especially in the morning. However, she also developed episodes of hot flushes that consisted of a warm sensation that lasted for several hours. In an attempt to eliminate the hot flushes, therapy was reduced to 30 minutes both in the morning and in the evening. Following the decrease in the duration of therapy, the patient reported that the hot flushes ceased, and her mood continued to improve without side effects.

The elimination of hot flushes that occurred once the therapy duration was decreased suggests that light therapy and hot flushes are associated. However, why light therapy, either directly or indirectly, might precipitate hot flushes is a difficult question to answer. One possible explanation involves the relation between hot flushes and the interaction of several hormones that are mediated by hypothalamic gonadotropin-releasing hormone (e.g., peripheral catecholamines, prostaglandins and endogenous opioids).[4] As proposed previously, light therapy may affect hypothalamic functioning, resulting in hot flushes.[2] An alternative explanation involves the placebo effect. Research on the placebo effect suggests that placebos may influence vasomotor reactions and hormonal secretion.[5] One might reason that the patient saw the light box as a source of heat and believed it would make her feel more energetic, hence warmer. Her beliefs and perceptions may have formed the basis of a placebo effect and induced the hot flushes.

We suggest that if light-therapy-treated patients develop hot flushes, then a reduction in light therapy may be warranted. As described here, a patient's symptoms may improve substantially even when the duration of light therapy is reduced below the recommended time.

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Clozapine and sialorrhea: a new intervention for this bothersome and potentially dangerous side effect

Dear Sir:

Among the frequently reported side effects of clozapine is nocturnal hypersalivation (sialorrhea) — a very troubling and potentially hazardous reaction for many of the patients who experience it. They describe the phenomenon as "drowning in my own saliva" and "waking from a sound sleep choking." Severe sleep disturbance due to fear of choking and noncompliance with clozapine treatment have been reported as a result.

Many treatment interventions have been used to alleviate this side effect: dose reduction, addition of antiparkinsonian agents such as benztropine mesylate and procyclidine, addition of clonidine, and even ingestion of sugarless candy. However, for the most part, these interventions have not provided any real relief from the symptoms. A review of the current literature does not provide any solutions to the problem.

Since the distress caused by this side effect can lead to refusal of clozapine treatment although positive clinical gains were being made, immediate relief is needed to maintain patients on clozapine therapy.

We tried atropine eye drops as a possible intervention. One drop of 1% solution was given sublingually at bedtime, with a view to upward titration of the dose as required. We considered providing 1 drop in a glass of water at the bedside to top up the dose should the patient wake during the night and notice an increase in saliva.

Three patients with severe nocturnal hypersalivation were started on this intervention. They were seen weekly in the schizophrenia clinic to assess the effects of the treatment. They reported "immediate relief" from the problem. The effects were reported as "almost instantaneous" and lasted throughout the night.

One patient is using the top-up method, and we continue to assess its efficacy. None of the patients report any side effects; however, we continue to monitor the treatment.

An easy and effective treatment for nocturnal hypersalivation in patients receiving clozapine is at hand. Further study is required, and we are now in the process of applying a more systematic approach to its assessment.

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