From Relief to Rash:

Unexpected Hypersensitivity to Bupropion

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In recent times, rates of depression have increased drastically. With this increase, more patients will be taking antidepressant medications such as bupropion. Therefore, treating physicians should be made aware of bupropion's side effect profile, so that they can accurately identify it as a causal agent when patients present with adverse drug reactions (ADRs). Bupropion, known by the trade names Wellbutrin and Zyban, is a norepinephrine-dopamine reuptake inhibitor indicated for the treatment of depression and smoking cessation. It is generally well tolerated with a side effect profile including agitation, dry mouth, headache, insomnia, and nausea.[1] However, in clinical trials, bupropion has been reported to cause hypersensitivity reactions, with symptoms that include urticaria, angioedema, pruritus, and dyspnea.[1] Hypersensitivity reactions to bupropion have also been described as serum sickness-like reactions, with symptoms including arthralgias, myalgias, fever, and rashes.[2] Interestingly, many of these ADRs occur with delayed onset approximately 2–4 weeks after beginning treatment.[3–7] This case report aims to add to the growing body of literature that describes these unusual ADRs associated with bupropion.

Case Report

A 33-year-old man with a history of depression presented to the emergency department (ED) with a rash 3 weeks after starting bupropion. He presented with a pruritic, erythematous, raised, shiny, and scaly rash involving the face, chest, groin, and abdomen. The patient reported medication allergies to sulfa drugs and penicillin (resulting in rashes), and he denied any recent exposures. Family history was noncontributory. He denied any environmental exposure or recent changes in soap or skin products. The patient's prior medication history included taking 20 mg of omeprazole for a diagnosis of gastroesophageal reflux disease and the recent addition of bupropion 150 mg extended release 3 weeks ago. Despite a history of previous allergies, ED staff advised him to continue bupropion, and he was discharged with calamine lotion. The patient returned to the ED the following day due to tongue and throat swelling, which began shortly after taking his daily bupropion. Epinephrine and methylprednisolone were administered in the hospital, and bupropion was discontinued. Over the next 3 to 4 days, the rash gradually faded with no lingering symptoms reported.

Discussion

This case adds to the growing body of literature regarding ADRs in patients beginning treatment with bupropion. The majority of literature about these ADRs are case studies, and both the manifestations and severity of hypersensitivity reactions that are documented in case reports are variable.[4,6,8–10] Other dermatologic ADRs to bupropion have also been reported, including Steven-Johnson syndrome and exacerbation of psoriasis.[10,11] In some reports, symptoms resolve quickly with oral antihistamines, systemic corticosteroids, and cessation of bupropion therapy; in others, patients have required hospital admission and extensive supportive care.[2,3,5] This occurred in the present case when the patient had to return to the ED, after being sent home once, with new-onset angioedema at the second visit. This highlights the importance of raising awareness about this unusual ADR presentation.

The mechanism by which bupropion causes hypersensitivity reactions 2–4 weeks after first exposure has not yet been thoroughly studied. Further research is necessary to better elucidate this mechanism in bupropion ADRs.

Conclusion

We present a case of an unusual ADR to bupropion 3 weeks into the medication regimen with a mixed hypersensitivity reaction. This case underscores the significance of further research into the mechanism of action through which bupropion causes hypersensitivity and serum sickness-like reactions even multiple days after initial administration.

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