Asymmetric, Tender Gynecomastia Induced by Olanzapine in a Young Male

Sir,
Approximately 10–25% of the causes of gynecomastia are drug-induced. Gynecomastia may result from imbalance in levels of androgen and estrogen as well as the elevated level of prolactin. Drugs involving these hormone systems are likely to cause gynecomastia. Antipsychotic medications-induced hyperprolactinemia may manifest as gynecomastia. Antipsychotic medications such as clozapine, olanzapine, aripiprazole, ziprasidone, and quetiapine possess prolactin-sparing property, hence the risk of gynecomastia with these medications is low. The evidence for olanzapine-induced gynecomastia are scarce and limited to case reports.

A 20-year-old male had complaints of suspiciousness, fearfulness, increased physical activity, and decreased sleep for the last 1 week. These symptoms caused significant impairment in day to day functioning. This was the first episode of psychiatric illness. Physical examination of the patient did not reveal any abnormality. His routine blood investigations, thyroid function tests were within normal limits. He was diagnosed with acute and transient psychotic disorder and was started on olanzapine 10 mg/day and clonazepam 0.5 mg/day. The patient had shown improvement on the above treatment and his symptoms resolved completely in a month time. At 6 months follow-up visit, the patient reported painful enlargement of both breasts. The enlargement was asymmetrical; more in the left side than right. The patient did not report any other side effects commonly observed with olanzapine. The dose of olanzapine was reduced to 5 mg/day as the patient was clinical stable and acetaminophen 500 mg was prescribed for pain on as and when required. After 2 months of dose reduction, there was a significant improvement. The tenderness as well as enlargement of both breasts resolved completely. Causality assessment had been done using Naranjo adverse drug reaction probability scale which was suggestive of “probable adverse drug reaction” to olanzapine.
Our patient had reported asymmetric, tender enlargement of the breasts (gynecomastia was more evident in left side than right). However, there was no sexual dysfunction. The side effect was reported with 10 mg/day olanzapine which improved when the dose of medication was reduced to 5 mg/day. There is evidence of unilateral gynecomastia with antipsychotic risperidone in a case study by Mendhekar and Andrade; however, similar evidence are lacking for olanzapine.

Some evidence also suggest that switching to olanzapine from risperidone improves the treatment-emergent prolactin disturbance and the improvement remains sustained over time. Dopamine and prolactin have antagonistic action with each other. Antipsychotic medications elevate prolactin levels through dopamine blockade. Dopamine blockade is also responsible for the efficacy of antipsychotic medications. It is required to observe whether side effects associated with hyperprolactinemia could predict the response to antipsychotics.

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Conflicts of interest
There are no conflicts of interest.

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