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BLEPHAROSPASM: A RARE ADVERSE EFFECT CAUSED BY LONG-TERM ADMINISTRATION OF OLANZAPINE

Psychiatry

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ABSTRACT

Olanzapine is an atypical (second generation) antipsychotic primarily used for schizophrenia and bipolar disorder . Its common side effects are weight gain, metabolic disturbances including high cholesterol and diabetes mellitus . Blepharospasm is an abnormal involuntary blinking or contraction of muscles of eyelids (orbicularis oculi, proceres and corrugated superciliaris). Blepharospasm is an uncommon adverse effect of Olanzapine and is thought to occur due to blockage of D2 dopamine receptor in the basal ganglia . We are reporting a case of 48 year old female , a known case of chronic schizophrenia since 12 years , who developed blepharospasm while taking olanzapine 20mg.

KEYWORDS

Olanzapine, Blepharospasm, Antipsychotics .

INTRODUCTION

Blepharospasm is one of the part of drug-induced Brueghel's syndrome(Meige's syndrome) which is reported to be caused by typical antipsychotics[1]. Reports of blepharospasm or Meige's syndrome caused by atypical antipsychotics are rare . Drug induced blepharospasm is an uncommon adverse effect characterized by abnormal involuntary blinking or contraction of the eyelids.[2] Blepharospasm is a type of focal tardive dystonia characterized by chronic intermittent or persistent closure of the eyelids.[3] Tardive dystonia is a type of "tardive" movement disorder induced by antipsychotics and is characterized by involuntary muscle contraction, which may be tonic, spasmodic, patterned, or repetitive. In comparison to typical antipsychotics, atypical antipsychotics have less extrapyramidal side effects because of a weak dopamine D2 receptor binding affinity or a strong antagonistic effect to serotonin 5-HT2a receptor and have been known to cause less tardive dyskinesia than typical antipsychotics[4]. Olanzapine is an atypical antipsychotic, research has suggested that Olanzapine has a higher affinity and occupancy rate for D2 receptor which may imply a higher than expected chance of inducing blepharospasm . There are only a few published case reports of Olanzapine induced TD till now . Here we describe a case of a 48 year old female , a known case of chronic schizophrenia ,who developed involuntary blinking while taking olanzapine.

CASE

A 48 years female presented in psychiatry opd with complaint of frequent and involuntary blinking of both eyes since last one month. It was difficult for her to keep her eyes open, interfering with her daily routine work and causing distress . It persisted throughout the day, and disappeared during sleep. She had no other associated involuntary movement of face or any other muscle . Patient is a Known case of schizophrenia since last 12 years , currently in remission. Her treatment and drug history revealed that she has been taking over the counter olanzapine 10 mg twice daily since last 7 years. Her routine blood investigations were within normal limit . Provisional diagnosis of drug induced blepharospasm was made , olanzapine was stopped and tab trihexyphenidyl 2 mg twice daily was initiated along with low doses of clozapine. Gradually her symptom of eye blinking reduced in frequency and remission was maintained in consequent follow up visit.

DISCUSSION

Blepharospasm , powerful involuntary closure of eyelids, is a rare consequence of antipsychotics treatment that when severe can affect daily routine. It can be very distressing. Although the pathogenesis of drug induced blepharospasm is not known , abnormalities of the cortical or subcortical neural pathways have been suggested [6].In our case patient is not able to do her daily routine activity because of illness. Meige's syndrome is one of the extrapyramidal syndromes due to long-term use of antipsychotics [7] . Chronic use of these agents may lead to imbalance between D1 and D2 receptors which could cause striatal suppression of the thalamocortical pathway and consequent dystonia.[8] In past positron emission tomography study suggested that reduction in dopamine D2 receptor binding may be one of the predisposing factors leading to dysfunction of the motor circuit resulting in loss of capacious inhibition of unwanted movements during an intended movement in blepharospasm patients.[9] Drug therapy for blepharospasm has proved generally unpredictable and short-termed. Anticholinergics, tranquillizing drugs and botulinum toxin are the mostly used therapeutic options. However serious side effects as well as failure of therapy can be observed . Novel therapies are constantly being tested. In Evidence show Mosapride of being a safe and affordable therapeutic option for blepharospasm .[10]Botulinum toxin injections have been used to induce localized, partial paralysis. Among most sufferers, botulinum toxin injection is the preferred treatment method.[11]

CONCLUSION

Blepharospasm is mostly cause by typical antipsychotics and Olanzapine is an atypical antipsychotics and rarely cause blepharospasm but such side effect of olanzapine must be kept in mind and be more cautious while prescribing medication in psychotic patients , although further similar evidences from observational studies and/or reports are needed to establish the causal relationship.

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