|| ISSN(online): 2589-8698 || ISSN(print): 2589-868X ||
International Journal of Medical and Biomedical Studies
Available Online at www.ijmbs.info
NLM (National Library of Medicine ID: 101738825)
Index Copernicus Value 2020: 79.44
Original Research Article Volume 6, Issue 03; March: 2022; Page No. 35-37

Dry Eye and Antipsychotic Drug

Dr Sunita Khurana[1], Dr Seema Rajvanshi[2]

[1]Principal Specialist, Ophthalmology, District Hospital Sri Ganganagar Rajasthan

[2]Principal Specialist , Ophthalmology, District Hospital Sri Ganganagar Rajasthan

Article Info: Received 16 January 2022; Accepted 18 March 2022
doi: https://doi.org/10.32553/ijmbs.v6i3.2466
Corresponding author: Dr Seema Rajvanshi
Conflict of interest: No conflict of interest.

Abstract

Background: To study the dry eye prevalence in patients on chronic antipsychotic therapy.

Methods: 50 patients who were diagnosed of schizophrenia and have been under anti-pschyotic were included.

Results: 17 patients out of 50 patients on anti-psychotic medications for more than 2 years had dry eye disease. Of the 100 eyes evaluated, 30 eyes were found to have dry eye disease. Patients on two drug regimen showed more prevalence of dry eye than on mono drug regimen in our study.

Conclusion: Anti-psychotic drug may induce dry eye syndrome and thus may lead to morphological alterations in corneal parameters through its anticholinergic and antidopaminergic activities.

Keywords: Dry eye, Prevalence, Antipsychotic

Introduction

Psychotropic drugs can potentially lead to many ocular adverse effects depending upon the idiosyncrasies, dosages, and the interactions with specific mechanisms of the body organs. After liver, the eye is supposed to be the second most frequent organ to manifest drug toxicity.[1-2]

The visual system consists of numerous tissues derived from different origins, and the eye has an extensive, rich blood supply although having a relatively small mass. Besides, neural tissues within the eye exhibit very high metabolic rates. All these factors are important for the human eye becoming sensitive to psychotropic treatments.[3-5]

Material and Methods

50 patients who were diagnosed with Schizophrenia and have been under anti-psychotic treatment were included.

The inclusion criteria were patients with diagnosis of schizophrenia aged 18 to 60 years who had been taking antipsychotic drugs (typical, atypical or both) for at least two years.

The exclusion criteria were patients who had diabetes, systemic arterial hypertension, previously diagnosed ocular diseases (glaucoma, retinopathies, corneal diseases), family history of either glaucoma or blindness, and patients who had taken corticosteroids, amiodarone or had had any ocular trauma. No patients with symptoms of acute angle closure glaucoma were included. Patients who did not give consent and who were not cooperative also exclude from study.

Results:

Table 1: Socio-Demographic Profile

Variable	Case (n=50)
Mean age ± SD (Yrs)	40.23±10.36
Male : Female	21:29

16 out of 50 patients on chronic anti-psychotic therapy had dry eye disease.

Discussion

17 patients out of 50 patients on anti-psychotic medications for more than 2 years had dry eye disease. Of the 100 eyes evaluated, 30 eyes were found to have dry eye disease. Patients on two drug regimen showed more prevalence of dry eye than on mono drug regimen in our study.

Dry eye disease is multifactorial disease of tear film and ocular surface that results in symptoms of discomfort, visual disturbance and tear film instability with potential damage to ocular surface.[6] It is accompanied by increased osmolarity of tear film and inflammation of ocular surface.

Dry eye is a chronic disease becoming commoner among the people all over the world, some of whom become blind as sequelae. So, a better knowledge of the disease and better mode of treatment would aid the physician to help these patients to overcome this chronic problem and maintain a good visual acuity.

Anti-psychotic agents are very commonly used medications in a Psychiatry setup for patients suffering from Psychoses and Delusional disorder. As these patients are on medications all through their life, side effects are seen very commonly in them.

Eye is the second most commonly affected organ by Anti-psychotic medications. Ocular side effects include blurring of vision, dry eye, corneal deposition of drugs, stellate capsular deposits, oculogyric crisis etc..[7] Of these many ocular side effects, Dry eye disease, often does not get proper attention and thus, leads to great discomfort to the patients. Possible mechanism suggested is due to the anti-cholinergic action of these drugs, they block the muscarinic receptors present over lacrimal gland. This decreases the tear secretion leading to an unstable tear aqueous layer. And that is the reason for aqueous deficiency and dryness of eyes.[8] According to a study by McIntosh et al, the schizophrenic patients on neuroleptics showed decreased blink rate which may be another cause of dry eye in these patients.[9]

Conclusion

Anti-psychotic drug may induce dry eye syndrome and thus may lead to morphological alterations in corneal parameters through its anticholinergic and antidopaminergic activities.

References

1. Bond WS, Yee GC. Ocular and cutaneous effects of chronic phenothiazine therapy. Am J Hosp Pharm. 1980;37:74-8.
2. Johnson AW, Buffaloe WJ. Chlorpromazine epithelial keratopathy. Arch Ophthalmol. 1966;76:664-7
3. Johnson AW, Buffaloe WJ. Chlorpromazine epithelial keratopathy. Arch Ophthalmol. 1966;76:664-7.
4. Edler K, Gottfries CG, Haslund J, Ravn J. Eye changes in connection with neuroleptic treatment especially concerning phenothiazines and thioxanthenes. Acta Psychiatr Scand. 1971;47:377-84.
5. Hansen TE, Casey DE, Hoffman WF. Neuroleptic intolerance. Schizophr Bull. 1997;23:567-82.
6. Malone DA, Camara EG, Krug JH. Ophthalmologic effects of psychotropic medications. Psychosomatics 1992;33(3):271-277.

7. Sihota R, Tandon R. Parson's diseases of the eye. 22nd edn. Elsevier 2015.
8. Minhas BOD. The Mind's eye: ocular complications of psychotropic medications. Review of Optometry 2016.
9. Oshika T. Ocular adverse effects of neuropsychiatric agents: incidence and management. Drug Saf 1995;12(4):256-263.