

A Case Report On Fluoro-Quinolones(Ofloxacin) Induced Psychosis At Nepal Medical College Teaching Hospital.

Khadka S¹, Singh PM², Khadka M³, Chakrabarti K⁴, Pandit S⁵, Dhonju G⁶, Gautam SC⁶

1. Resident, Department of Psychiatry, NMC, Kathmandu, Nepal 2. Associate Professor, Department of Psychiatry, NMC, Kathmandu, Nepal 3. Health Coordinator, AMDA, Damak, Jhapa, Nepal 4. Professor, Department of Psychiatry, NMC, Kathmandu, Nepal 5. Trainee, Federation University, Australia 6. Lecturer, Department of Psychiatry, NMC, Kathmandu, Nepal

E-mail *Corresponding author : sabitahadka13@gmail.com

Abstract

Psychosis is a mental disorder in which the thoughts, affective response, ability to recognise reality and ability to communicate and relate to others are significantly impaired to interfere grossly with the capacity to deal with the reality.¹ Psychosis can also occur as a side effect of some type of drugs and may be misdiagnosed as psychiatric illness.² We report a rare case of 30 years old female admitted to Nepal Medical College with hallucinations and delusions following ofloxacin use, by extensive / detailed history taking.

Keywords: Adverse Events, Psychosis, Ofloxacin

INTRODUCTION

Ofloxacin is an antibiotic belonging to first generation fluoroquinolones which inhibit the enzyme bacterial DNA gyrase. It is used in multitude of illnesses like urinary tract infections, gonorrhoea, bacterial gastroenteritis and other respiratory or ENT infections. It has frequently been implicated in causing central nervous system (CNS) side effects. Other common side effects accounted are gastrointestinal disturbances, skin hypersensitivity.³ Different reports uncovered that neuropsychiatric symptoms like agitation, confusion, delirium, low mood, hallucinations, vertigo and sleep deprivation have been accounted with the use of ofloxacin.^{4,5} Here, we tried to uncover the fact with a case report of 30 years old female who revealed psychosis after the use of fluoroquinolones.

CASE- HISTORY

A 30 years old female patient had history of fever associated with chills, rigor and burning sensation of urine since 7 days. Laboratory tests were done and turned out to be normal. A chest radiograph was normal. Urine routine microscopic examination showed plenty of pus

cells. The patient was suspected of urinary tract infection for which she was started on Ofloxacin and Flavoxate HCL by a private physician. The patient received five doses of Ofloxacin, 400mg two times a day and Flavoxate HCL, three times a day. The patient's symptoms gradually improved. However, from the next morning she started being suspicious towards her neighbor (aunt), saying that she is a witch who is trying to kill her. She claimed to hear voices of different gods with whom she talks but her family members said they did not hear any voices nor their neighbor were trying to harm her. Also, her talk was not pertinent to the subject under consideration. This behavior lasted for 3 days and was difficult to manage at home so she was brought by her family to Nepal Medical College Teaching Hospital, Psychiatric Out Patient Department for consultation and was admitted on the very day. After admitting the patient, vitals were taken and physical examinations were done. The examination did not show any deficits. MSE revealed increased psychomotor activity, rapport not fully established, Speech-increased volume and rate, Mood O- irritable, Thought Form-irrelevant, Content-delusion of persecution, Perception- auditory hallucination,

Judgement- personal, social and test all impaired, Insight- grade I. Past medical history included Pulmonary Tuberculosis 9 years back for which she took full course of Anti Tubercular Therapy and repeated sputum examination for AFB showed negative results. No past history of psychiatric illness was noted. Pre-morbid Personality was found normal. Laboratory tests were normal which includes complete blood count, electrolytes, urine routine examination. After detail history taking, provisional diagnosis of Ofloxacin induced psychosis was made and the antibiotic was stopped. Twenty four hours after stopping ofloxacin, she was no longer having auditory hallucination and delusion. And she could remember the whole episode. She was kept under observation for one week and no above mentioned symptoms were seen during that period.

DISCUSSION:

It had been reported that 18.3673% of patients under ofloxacin developed psychosis as a side effect.⁶ Literature shows the evidence of hallucinations following the fluoroquinolones use hence, we believed the hallucinations in our patient is due to the ofloxacin component.^{3,7-9} The psychiatric adverse effects of fluoroquinolones are severe to life-threatening at times. People without any history of psychiatric problems have experienced depression, paranoia, psychosis, anxiety, etc. after taking fluoroquinolone antibiotics.¹⁰ The mechanism of fluoroquinolone-associated CNS toxicity has not been fully understood, but rather may include gamma amino butyric acid (GABA) and restraint of binding of GABA to GABA-A receptors in the CNS bringing about CNS stimulation.⁵

Our patient developed psychiatric symptoms after five doses of fluoroquinolones and recovered within 24 hours of discontinuation of the drugs. In this manner, it is imperative to distinguish these uncommon, however, totally reversible mental unfavorable impacts of fluoroquinolones so as to stay away from a wrong analysis and superfluous work-up and treatment. Hence, antibiotics should be used very cautiously so that unnecessary side-effects are avoided.

CONCLUSION:

Fluoroquinolones are widely used drug due to its various indications. Hence, it is important to be aware of the psychiatric adverse effects of these drugs whenever there is change in behavior. This case report suggests that caution should be exercised while administering fluoroquinolones like ofloxacin.

REFERENCES:

1. Kaplan & Sadock's Comprehensive Textbook Of Psychiatry, Vol I, 9th edition
2. nhs.uk. Causes [Internet] 2016. Available from: <http://www.nhs.uk/conditions/psychosis/pages/causes.aspx>, Accessed on 24 May 2018.
3. Zaudig M, von Bose M. Ofloxacin- induced psychosis. Br J Psychiatry 1987; 151: 563-4.
4. Lipsky BA, Baker CA. Fluoroquinolone toxicity profiles: A review focusing on newer agents. Clin Infect Dis 1999; 28: 352-64.
5. Domagala JM. Structure-activity and structure-side-effect relationships for the quinolone antibacterials. J Antimicrob Chemother 1994; 33: 685-706.
6. MedsFacts Inc. Study of possible correlation between psychotic disorder and ofloxacin(ofloxacin) [Internet]. Available from: [http://factmed.com/study-OFLOXACIN\(OFLOXACIN\)-causing-PSYCHOTICDISORDER.php](http://factmed.com/study-OFLOXACIN(OFLOXACIN)-causing-PSYCHOTICDISORDER.php), Accessed on 24 May 2018.
7. Tomé AM, Filipe A. Quinolones: Review of psychiatric and neurological adverse reactions. Drug Saf 2011; 34: 465-88
8. Blomer R, Bruch K, Krauss H, Wacheck W. Safety of ofloxacin- Adverse drug reactions reported during phase-II studies in Europe and in Japan. Infection 1986; 14: S332-4.
9. Koverech A, Picari M, Granata F et al. Safety profile of ofloxacin: The Italian data base. Infection.1986; 14: S335-7.
10. Bloomquist L. Psychiatric Side Effects of Fluoroquinolone Antibiotics; 2014.