

Dostinex® and obsessive compulsive disorder

Abstract

Obsessive Compulsive Disorder (OCD) related to cabergoline Dostinex® gold is one of the uncommon side effects of this product often passing unnoticed because it is quite unknown. It usually regressed completely Call after-stopping or decreasing Dostinex® and the establishment of a symptomatic treatment. The pathophysiology remains unknown but it Appears that this requirement May be due to dysregulation of neurotransmitters serotonin and dopamine primarily in the central nervous system.

We report the case of an 18 year old patientwho presented a secondary TOC in decision Dostinex® for Treatment of a prolactinoma. This side effect Was Retained accountability following the study by the department of Pharmacology and Pharmacovigilance. The patient received a dose Then reduction of cabergoline, a psychiatric consultation with initiation of antidepressant therapy: sertraline (of the family of selective serotonin reuptake inhibitors of). The evolution was marked by the remission of symptoms.

Keywords: obsessive compulsive disorder, cabergoline, dostinex®, pharmacovigilance

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Aziouaz F,¹ Andzouana N,¹ El ouahabi H,¹ Khabbal Y,² Ajdi F²

¹Department of Endocrinology and Diabetology Nutrition, Morocco

²Pharmacology, CHU Hassan II, Fes, Morocco

Correspondence: Fatima Aziouaz, Department of Endocrinology and Diabetology Nutrition, CHU Hassan II, Fes, Morocco, Email fatima.aziouaz@gmail.com

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Introduction

Obsessive compulsive disorder secondary to the administration of cabergoline or Dostinex® is rare but serious because it adversely affects the personal and social life of the individual. In literature forms of compulsive behavior are mentioned especially pathological gambling, compulsive shopping and hypersexuality, so that through our observation we will illustrate another form of compulsive disorder related to cabergoline, that of cleanliness that unlike gambling and compulsive shopping brings no pleasure, since it is associated with the obsession with dirt.

The ignorance of this type of adverse effects of cabergoline may lead to serious complications (depression, alcoholism, academic or professional failure...) or downright risky behaviors like suicide attempt. And patient observation: Mrs. HN, aged 18, housewife, married with a child, has consulted for anxiety and anxiety related dirt obsessions, compulsions associated with repetitive washing her body type and his clothes several times a day. The patient also acknowledged that his behavior and his ideas are irrational, disproportionate and odd, but she was unable to do otherwise. In this history, the patient was followed in our service to macroadenoma 10x7mm prolactin, a complicated hypogonadism hypogonadism and an adrenocorticotrophic deficiency, chronic headache without visual impact, turning on Dostinex® cabergoline 0.5mg / week. The evolution after six months of treatment was marked by the gradual onset of the above symptoms cited motivating symptomatic treatment based on magnesium by a general practitioner. Three months and again later before the non-improvement of its symptoms the patient decided to consult our training.

Clinical examination during the interview with the patient helped highlight obsessive compulsive disorder indices and annoying impact the daily life of the patient and hinder access to normal social life. In fact, the patient became all the time stressed and anxious this that put him and his family in a true suffering. The remainder of the physical examination was normal including no galactorrhea or abnormalities on neurologic examination. We also noted the improvement of headache, and the recovery of gonadal function and adrenocorticotrophic under

cabergoline. The realized laboratory tests found a control prolactin levels to 20 ng / ml (5-29.4).

By analyzing the picture presented by the patient we spoke obsessive compulsive drug-induced disorder (cabergoline). The accountability study which was carried out by the Pharmacology and Pharmacovigilance service confirmed the drug-induced OCD.

The therapeutic management has been to decrease the dose of cabergoline to 0.25 mg/week and a psychiatric opinion the patient has benefited from the initiation of antidepressant treatment (sertraline PC 50mg / day). The evolution to a month later was marked by a remission of clinical symptoms, with normal levels of the control of serum prolactin.

Discussion

The Obsessive Compulsive Disorder (OCD) is probably the anxiety disorder most serious and the most incapacitating. It is characterized by the presence of recurrent obsessions behind an often severe anxiety and great pain that the subject seeks to reduce by using various strategies neutralizing called compulsions. OCD appears to be due to an overactive several brain circuits, including basal ganglia involved in behavior and motor skills, or the anterior cingulate cortex and the orbitofrontal cortex, more involved in managing motions. This hyperactivity could be explained by the action of certain neurotransmitters such as serotonin, dopamine or vasopressin. Moreover, this principle is the pathophysiologic therapeutic management. It is made based on antidepressants acting specifically on serotonin reuptake.

Cabergoline is a dopamine agonist (DA) D2 derived from ergot with a powerful inhibitory activity and prolonged secretion of prolactin. It acts by direct stimulation of dopamine-D2 receptors on pituitary lactotrophs to, inhibiting prolactin secretion. It is a high affinity for the D2 receptor which makes it better tolerated than bromocriptine. Available data in humans confirm the experimental observations in animals indicating that the test compound has a highly selective activity without effect on basal secretion of other

pituitary hormones.^{1,2} Obsessive compulsive disorder (OCD) is a rare but serious side effect that can result from cabergoline. The most common side effects are nausea, vomiting, headache, dizziness, and heart valve disease, rarely hypotension or discomfort, and more rarely mastodynia, hot flushes, depression and paresthesia.^{3,4}

Dostinex® is indicated for the treatment of idiopathic hyperprolactinemia and hyperprolactinemia related to the presence of a pituitary microadenomas or macroadenoma.⁵ In practice, the initial dose is 0.5 mg per week in a single take. This dosage of 0.5 mg per week will be maintained for 4 weeks then adapted according to prolactin. After equilibration of dosage, a quarterly dosing prolactin proves sufficient.^{6,7} The particularity of our observation is the fact that our patient was put under cabergoline for his prolactinoma later, she presented as a side effect OCD whose theme was never reported in the literature. In fact in a study published by the SLOVAKIA neurology service team in 2011 on 20 patients followed for pituitary adenoma mainly prolactinomas, two (10%) of 20 subjects developed compulsive behavior disorders, the first patient was a 35 year old male with giant macroprolactinoma which was in turn treated with various types of AD (cabergoline, bromocriptine and quinagolide). He developed compulsive eating and gambling. The second patient is a 53 year old man with macroprolactinoma who suffered from severe hypersexuality after administration of cabergoline.⁸

In the case reported by St George's University in 2014, about a patient treated for hyperprolactinemia with weekly doses of cabergoline for 12 years. During this period, she had suffered from binge eating and compulsive buying what sounds on its weight and its financial position.⁹ The same finding was made but this time in a 55 years old patient followed for idiopathic Parkinson's disease who developed three changes in behavior in combined therapy with selegiline, cabergoline and levodopa. These behaviors included coexisting severe pathological gambling, hammering and a new skill that of poetry with published books.¹⁰

Conclusion

In the case we reported, the TOC was secondary to cabergoline, which induced dopamine and serotonin hypothalamic disorder. Remission of OCD to the reduction of cabergoline dose and after 01 months of treatment with 50mg sertraline cp/d, confirmed the diagnosis of obsessive compulsive disorder secondary to cabergoline.

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None.

Conflicts of interest

The author declares there is no conflict of interest.

References

1. Sharif NA, McLaughlin MA, Kelly CR, et al. Cabergoline: Pharmacology, ocular hypotensive studies in multiple species, and aqueous humor dynamic modulation in the cynomolgus monkey eyes. *Exp Eye Res.* 2009 ;88(3):386–397.
2. National Institute of Mental Health. *DHDP Ki Database (Internet)*. University of North Carolina, Chapelhill, 2013; USA.
3. FP Pralong, RC Gaillard. Division of Endocrinology and Metabolism, Department of Medicine, Centre Hospitalier Universitaire Vaudois, Lausanne, Geneva Foundation for Medical Education and Research, Edited by Aldo Campana, 2015.
4. Brue T, Delemer B. Diagnosis and management of hyperprolactinemia: expert consensus – French Society of Endocrinology. *Annales d'Endocrinologie.* 2007 ;68(1):58–64.
5. Martinkova J, Trejbalova L, Sasikova M, et al. Impulse control disorders associated with dopaminergic medication in patients with pituitary adenomas. *Clin Neuropharmacol.* 2011;34(5):179–181.
6. Premaratne VS, Saeger I, Macdonald BK. Lesson of the month (1): Cabergoline–i eat it funny that. *Clin Med.* 2014 ;14(2): 205–207.
7. Joutsa J, Martikainen K, Kaasinen V. Parallel appearance of Compulsive Behaviors and artistic creativity in Parkinson's disease. *Case Rep Neurol.* 2012 ;4(1):77–83.
8. Akiko I, Ryan JU, Zbigniew KW. Dopamine agonist therapy for Parkinson's disease and pathological gambling. *Parkinsonism & Related Disorders.* 20016 ;12(8):506–508.
9. Santiago Almanzar, Maria I Zapata-Vega, Juan A Raya. Dopamine Agonist-Induced Impulse Control Disorders in a Patient with prolactinoma. *Psychosomatics.* 2013 ;54(4):387–391.
10. Ahlskog JE. Pathological Behaviors Provoked by dopamine agonist therapy of Parkinson's disease. *Physiol Behav.* 2011;104(1):168–172.
11. Toshio N. Chapter 13–Drugs That Affect Autonomic Functions or the Extrapyramidal System. *Side Effects of Drugs Annual.* 2014 ;35:163–174.
12. McKeon A, Josephs KA, Klos KJ, et al. Unusual Compulsive Behaviors Primarily related to dopamine agonist therapy in Parkinson's disease and multiple system atrophy. *Parkinsonism & Relat Disord.* 2007 ;13(8):516–519.
13. Pignatti R, Brioschi A, Mauro A, et al. Selective IGT decision-making impairment in a patient with juvenile Parkinson's disease and pathological gambling: a role for dopaminergic therapy? *Neurocase.* 2012;18(6):503–513.