Case Report

# Cabergoline toxicity: A case report

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## ABSTRACT

We are presenting a case of cabergoline toxicity in a patient with primary infertility; the main cause being high levels of prolactin (PRL). The aim was to examine this hyperprolactinemic patient, the ability to normalize the PRL levels with cabergoline, to determine the effectiveness, to assess the effect on clinical symptoms, and to determine its management. We prospectively studied this single hyperprolactinemic patient who was treated with cabergoline to normalize the PRL levels, but negative impacts were identified by cabergoline, patient was hospitalized, symptoms were documented, dermatologists, endocrinologists, and intensivists were also consulted for the same. As a result, the patient finally had a positive response and showed no signs of toxicity.

**Key words:** Bromocriptine, Cabergoline, Hyperprolactinemia, Infertility, Prolactin, Toxicity

Cabergoline is a synthetic ergoline derivative with potent, selective, and long-lasting inhibitory activity on prolactin (PRL) secretion acting on dopamine receptors (D2 agonist) present in pituitary lactotrophs [1,2]. It is shown to be significant in inducing a complete biochemical response and clinical efficacy in dose-dependent suppression of PRL secretion in women with hyperprolactinemia, macroprolactinoma, in patients resistant or poorly responsive to bromocriptine, Acromegaly, Cushing's disease, and currently also recommended in women seeking pregnancy [3].

## CASE REPORT

A 34-year-old female presented to the hospital with complaints of rashes and itching all over her body for the past 4 days (Figs. 1 and 2). She had a history of taking the Tablet Cabergoline for 7 days as advised by her gynecologist for primary infertility because of her increased PRL levels (Serum prolactin: 33.4 ng/L). She was advised to take one tablet once a week but she misunderstood and took the tablet Cabergoline regularly for 7 continuous days. She also had associated symptoms of constipation, vomiting, and the sensation of choking.

The patient was admitted to the hospital and continuous vital monitoring was done. She was started on analgesics, antihistamines, antibiotics, corticosteroids, prokinetics, and multivitamins. This case was also discussed with dermatologists, endocrinologists, and intensivists. They asked to continue antihistamines and hold Cabergoline for 1 month.

She was asked to be under observation for 64 h after their last intake of medicine, respectively. However, after 48 h of under observation, she was feeling well and was vitally stable and was not willing to stay so was discharged on request. She was asked for a follow-up after 7 days with her repeat PRL levels which came out to be 1.19 ng/L and was advised to continue the same treatment for a week and to catch up back if having any problems.

## DISCUSSION

The patient was admitted with the adverse effects of the Cabergoline drug in the form of rashes all over the body. After stopping the drug and starting treatment as discussed with dermatologists, endocrinologists, and intensivists, the patient improved symptomatically. The study determining the effectiveness of cabergoline stated to be having high efficacy and tolerability of cabergoline in the treatment of pathological hyperprolactinemia, leaving few patients with unacceptable side effects or inadequate clinical response [4].

Some studies comparing the effects of Cabergoline and Bromocriptine on PRL levels also showed Cabergoline to be very effective and has rapid action for lowering the PRL levels in hyperprolactinemic patients [5,6] and that it appears to offer considerable advantage over bromocriptine in terms of efficacy, tolerability, easy administration, and compliance, and may also become the drug of choice in hyperprolactinemic

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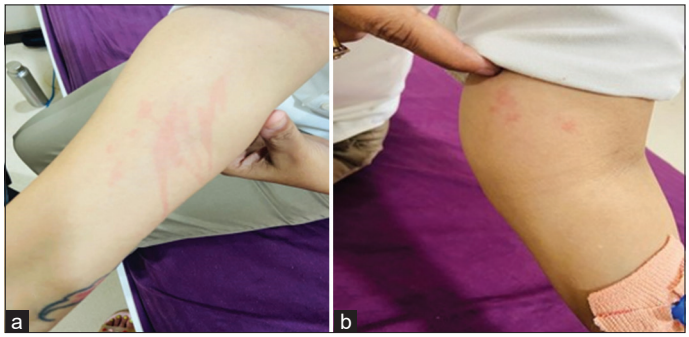

**Figure 1: Rashes at (a) the anterior aspect of the right-arm and (b) the medial aspect of the left forearm (day 1)**

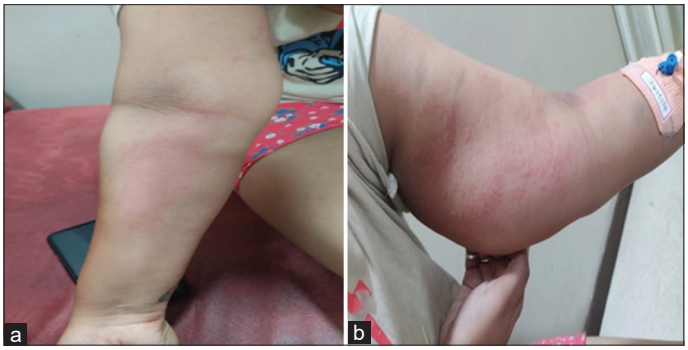

**Figure 2: Rashes at the (a) anterior aspect of the right-arm and (b) the anterior aspect of the right-arm (day 2)**

disorders [7]. A study analyzed the pregnancy outcome after cabergoline treatment in the early weeks of gestation and reported that we can exclude a congenital malformation risk >10% associated with pregnancy exposure to cabergoline [8], and also indicates normal physical and mental development in follow-up babies [9].

The incidence of adverse symptoms and the number of women discontinuing treatment because of side effects were lower in the cabergoline group [10]. Cabergoline also normalizes PRL in the majority of patients with known bromocriptine intolerance or resistance [4,5].

The diagnosis and treatment of complicated disorders such as Type II diabetes mellitus, acromegaly, and hyperprolactinemia require not only an astute patient-centered approach from physicians but an inter-professional team of healthcare workers who can guide patients from their first clinic visit until achieving symptomatic control. Lapses in inter-professional communication can cause confusion and mistakes in the treatment of patients, potentially carrying lethal consequences that may lead to unnecessary morbidity and mortality.

## CONCLUSION

Cabergoline is a drug with a historically safe side-effect profile and very rare severe adverse effects, but it is a necessity that communication is present between each member of the team to ensure safe and effective treatment, dose per day because even one unnecessary adverse event is one too many.

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