

# The Efficacy of Using Cabergoline in Psychogenic Erectile Dysfunction Treatment (A Local Study)

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## ABSTRACT

**Objective:** To assess the welfare and efficiency of combined cabergoline and tadalafil in the treatment of patients with psychogenic erectile dysfunction.

### Patients and methods:

From January 2015 to January 2020, and 580 patients with psychogenic erectile dysfunction presented at Al Ramadi and Al Yarmouk teaching hospitals and private clinics were enrolled in this prospective case control study. The age of patients ranged from 20 to 62 years. Thirty patients were lost the follow up and did not complete the study. The patients randomly divided into 2 groups; A and B, group A consisting of 250 patients, received tadalafil tablets 5 mg daily alone for 1 month and group B consisting of 300 patients received cabergoline 0.5 mg weekly in addition to tadalafil 5 mg daily, and we compared the improvement in the erectile function among the 2 groups.

**Results:** There was no statistically significant difference in age

between the 2 groups (p value > 0.05). There was statistically significant improvement in the erectile function in patients taking cabergoline and tadalafil compared to tadalafil monotherapy (p value < 0.05).

**Conclusion:** The use of combination treatment of cabergoline and tadalafil was unscathed and more operative in the treating of patients with psychogenic dysfunction erectile compared to tadalafil monotherapy.

**Key words:** erectile dysfunction, cabergoline, tadalafil,

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## INTRODUCTION

Erectile Dysfunction is failure to earn or preserve an erection sufficient of intercourse sexual of the satisfactory. It can be organic or psychogenic<sup>(1,2)</sup>. The prevalence of psychogenic erectile dysfunction ranged from 10 to 90%, and it is more commonly seen in younger patients than older patients, so as the patient is younger, erectile dysfunction is more likely to be psychogenic<sup>(3)</sup>. There are many erectile dysfunction risk factors including age, smoking, obesity, hypertension, coronary artery disease, and depression as well as other psychological variables<sup>(4,5)</sup>.

The role of dopamine and dopamine receptors has been thoroughly investigated in many pharmacological studies regarding its effect in the central regulation of sexual behavior and allied sexual response in males<sup>(6)</sup>. The observed improvement in libido and sexual potency with the administration of L-dopa to patients with Parkinson's disease was the first observation that triggered the attention to the dopamine mediated improvement of sexual behavior<sup>(7)</sup>. Subsequently, male erectile dysfunctions have been treated successfully with dopamine agonists<sup>(8)</sup>. Also erectile function has been reported to be potentiated by dopamine agonists in experimental models<sup>(9)</sup>.

Cabergoline is a long-acting dopamine receptor agonist and one of the most used drugs in the treatment of hyperprolactinemia, it is able to normalize the prolactin levels, restore gonadal function and promote tumor reduction in the majority of patients<sup>(10,11)</sup>.

Tadalafil is phosphodiesterase type 5 (PDE5) inhibitor, it takes 2–4 hours to absorb and has a half-life of 17.5 hours, so it lasts longer in the body and it is one of the initial line

of treatment for erectile dysfunction recalcitrant to way of life alterations. It is the only oral medicine ratified for daily utilize, relatively than on an as on demand<sup>(12)</sup>.

We conducted this study to assess the effect of cabergoline in improving psychogenic dysfunction erectile when combined with tadalafil.

## PATIENTS AND METHODS

The study period extended from January 2015 to January 2020, and 580 patients with psychogenic erectile dysfunction presented at Al Ramadi and Al Yarmouk teaching hospitals and private clinics were enrolled in this prospective case control study. The age of patients ranged from 20 to 62 years. Thirty patients were lost the follow up and did not complete the study. The patients randomly divided into 2 groups; A and B, group A consisting of 250 patients, received tadalafil tablets 5 mg daily alone for 1 month and group B consisting of 300 patients received cabergoline 0.5 mg weekly in addition to tadalafil 5 mg daily. Patients with any coronary artery disease, uncontrolled hypertension, diabetes mellitus, endocrine disorder, prostatic diseases, previous pelvic surgery, spinal diseases or injury, neurological disease and any established psychiatric illness were excluded from our study, detailed history and thorough physical examination was done for each patient. Erectile function domain which is the sum of Questions 1-5 and 15, with a most result of 30(13). Thus approval was acquired from all patient. The study confirmed via the ethical committee at the college of medicine. The suitable statistical systems were used in order to analyze and assess the results including Pearson Chi-square test, statistical

table and graphical presentation using the SPSS program (version-24).

## RESULTS

A total of 580 patients was chosen of the study, 30 patients did not complete the study due to loss of follow up. So the total number of patients who completed the treatment was 550 patients ( 250 patients in group A and 300 patients in

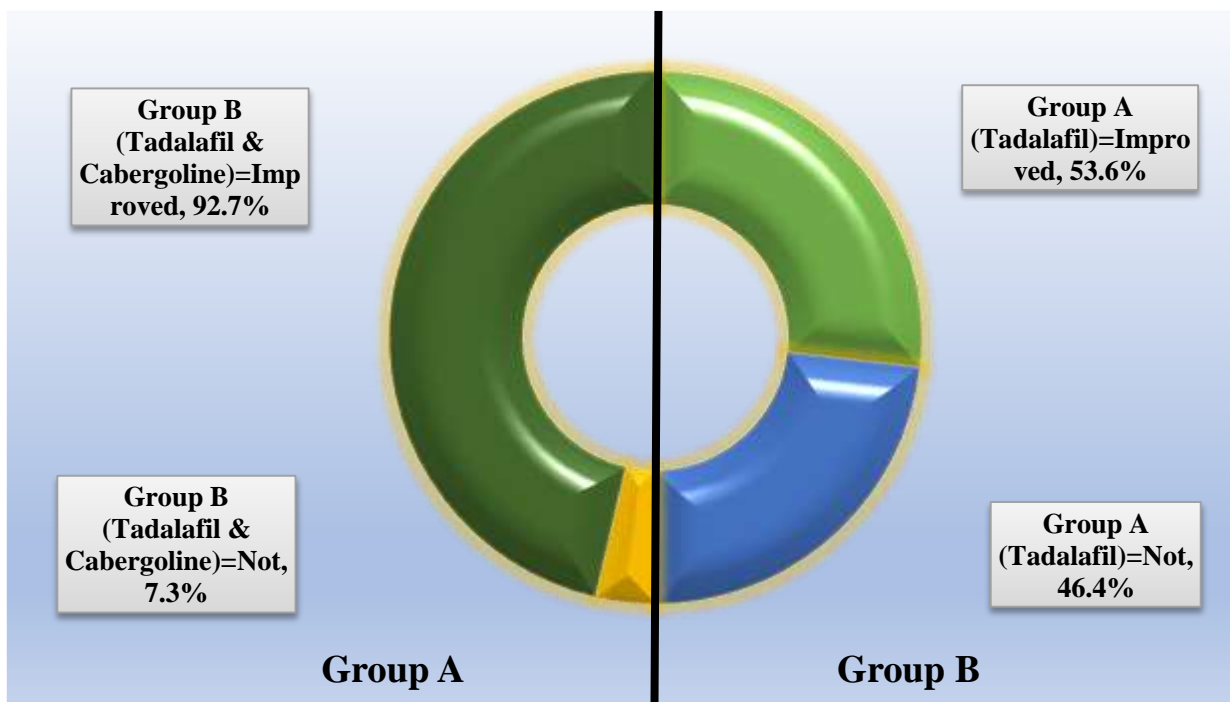
group B), the range of age in group A was 22-59 years and in group B was 20-62 years with no statistically important several in the age among the 2 groups ( $p$  value  $> 0.05$ ).

The percentage of patients with significant improvement in the erectile function was 53.6% in group A and 92.7% on group B with highly significant difference between the 2 groups ( $p$  value  $< 0.05$ ). Table 1 and fig. 1

**Table 1:** The percentages of improvement in erectile dysfunction.

	Group A (Tadalafil 5 mg/day)	Group B (Tadalafil 5 mg/day + Cabergoline 0.5 mg/week for 1 month)
Age range (years)	22-59	20-62
Total	250	300
Improved	134 (53.6%)	278 (92.7%)
Not	116 (46.4%)	22 (7.3%)
P value	0.0001*	

\*Highly important several among proportions utilizing Pearson Chi-square test at 0.05 level.



**Figure 1:** The percentages of improvement in erectile dysfunction.

## DISCUSSION

Healthy sexual life and good quality of erection are components key to not only quality individuals of life however too their partner's mental, romantic, and physical well-being<sup>(14)</sup>.

Many patients without obvious organic cause and who are considered to have psychogenic erectile dysfunction do not respond to life style changes<sup>(15)</sup>, and even some oral medication. So we tried combination treatment to enhance erectile function improvement and we chose cabergoline in addition to tadalafil depending the facts that dopamine agonists like ropirinole, apomorphine, and cabergoline was appear to rise erection penile and libido patients of disease Parkinson's (16). And also on the observation that

cabergoline stimulate an acute amendment of plasma prolactin levels of the men healthy that might potential impact modulating the function and drive of the sexual<sup>(17)</sup>. This type of combination revealed significant improvement in erectile function in the current study compared with tadalafil monotherapy. These results are consistent with the observation of Nickel et al<sup>(8)</sup>. The utilize of combination treatment for erectile dysfunction have been adopted by many investigators, such as the use of tadalafil in combination with Pentoxifylline which resulted in important development in erectile utility<sup>(18)</sup>, too statins and testosterone seem to have synergetic effects with PDE5 inhibitors on sexual activity<sup>(19)</sup>.

The combination of cabergoline with tadalafil was safe as there was no drugs interaction and no increase in the side effects.

## CONCLUSION

The use of combination treatment of cabergoline and tadalafil was unscathed and more operative in the treating of patients with psychogenic dysfunction erectile compared to tadalafil monotherapy.

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