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### RESEARCH ARTICLE

#### CENTRAL SEROUS CHORIORETINOPATHY FOLLOWING ORAL USE OF TADALAFIL

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##### Manuscript History

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#### Abstract

Central serous chorioretinopathy (CSCR) is characterized by a localized serous detachment of the neuroretina (DSR), associated with detachments of the retinal pigment epithelium (RPE) at the posterior pole [1] and a leakage of fluid in the subretinal space. Pregnancy, Type A personality, and systemic corticosteroid therapy are the main risk factors for Central Serous Chorioretinopathy [2]. We report the case of a patient who developed central serous chorioretinopathy following the oral intake of 20mg tadalafil erectile dysfunction, suggesting a possible involvement of phosphodiesterase type 5 inhibitors as a risk factor for central serous chorioretinopathy.

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#### Introduction:-

##### Case Report:

We report the case of a 41-year-old patient with no significant medical history, who presented with a decrease in visual acuity in the right eye accompanied by metamorphopsia for the past 15 days.

On a detailed ophthalmologic examination of the patient, the best corrected visual acuity was 2/10 in the right eye and 10/10 in the left eye. Intraocular pressure was measured at 15 mmHg in both eyes.

Examination of the anterior segment showed a clear cornea, deep anterior chamber, normal iris texture and coloration, and a clear lens.

Posterior segment examination revealed a retinal serous detachment. Fluorescein angiography showed an early leakage point at the upper nasal side to the macula with progressive diffusion in the later stages.

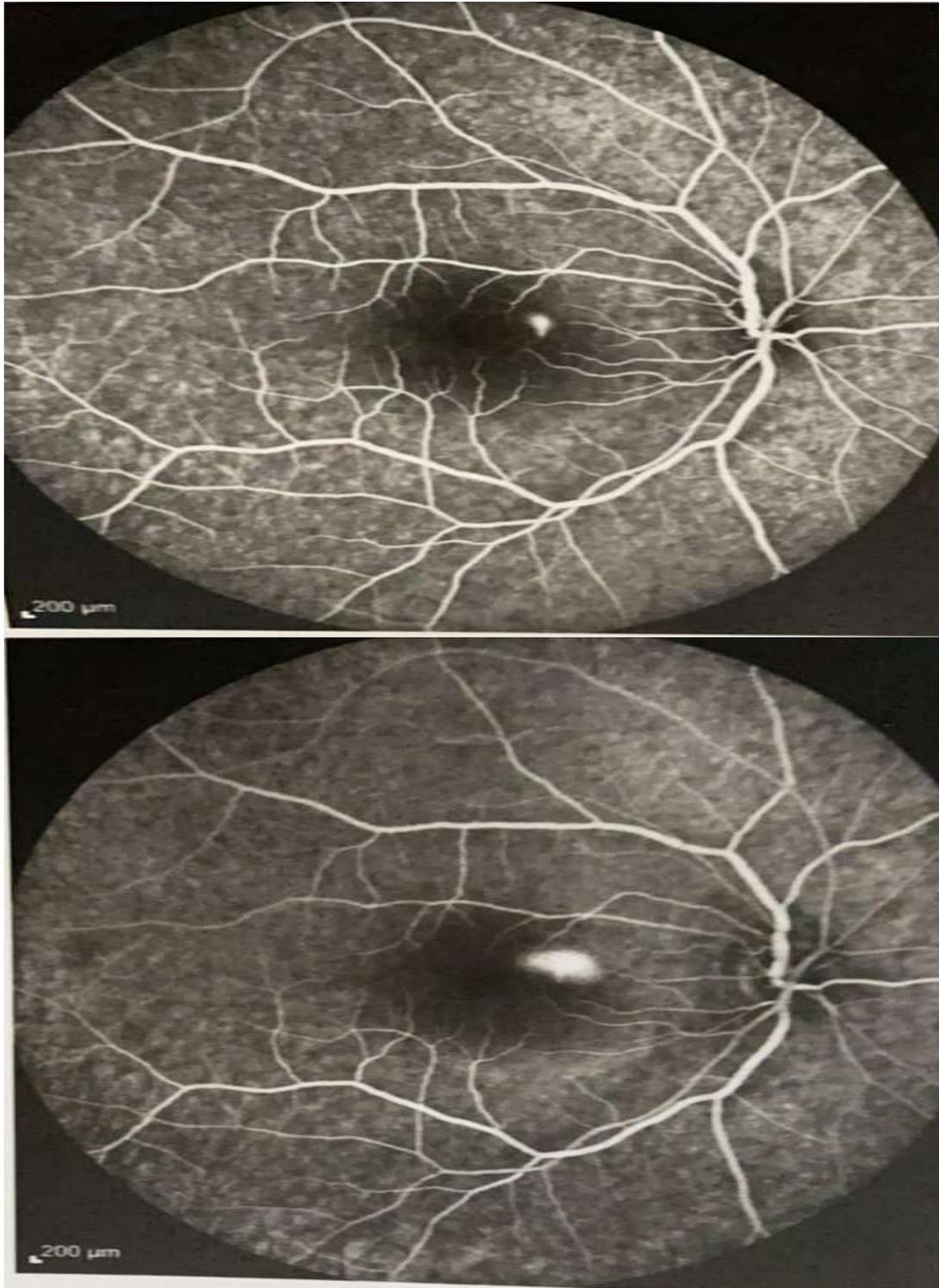
Optical coherence tomography confirmed the diagnosis of central serous chorioretinopathy, revealing a large serous macular retinal detachment retro-foveal with interruption of the ellipsoid line.

The patient reported no Type A personality traits or corticosteroid use during the interview but mentioned the oral intake of 20mg of Tadalafil weekly for erectile dysfunction for one month.

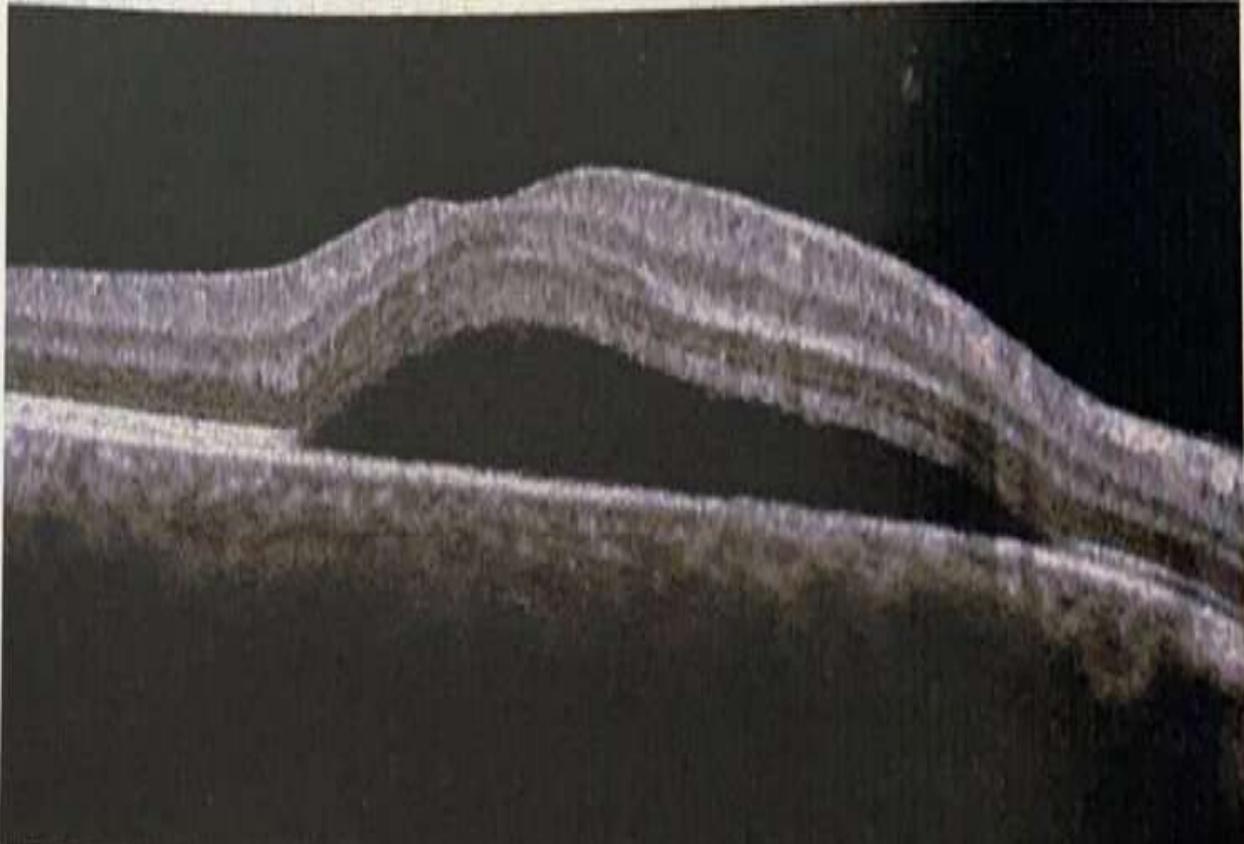
We decided to stop all Tadalafil treatment. After one month, a follow-up examination revealed improved visual acuity in the right eye at 10/10 with complete regression of the serous retinal detachment.

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**Figure 1:-** Fluorescein angiography in then late stages of the right eye showing the progressive diffusion of the Leakage point in the upper and nasal side of the macula.



**Figure 2:-** OCT of the right eye showing serous retinal detachment and the subretinal fluid accumulation in the macula.

### **Discussion:-**

Tadalafil (Cialis) is a PDE5 inhibitor used for erectile dysfunction. They act as potent vasodilators by causing relaxation of smooth muscles, leading to increased blood flow primarily in the corpus cavernosum, and secondarily in the choroidal and retinal vessels due to the presence of phosphodiesterase receptors in the choroidal and retinal vasculature [5]

Various manifestations have been described following Tadalafil intake, including conjunctival hyperemia, changes in color vision, and, in severe cases, anterior ischemic optic neuropathy.[3] other studies showed no correlation between Tadalafil and Ocular manifestation [4] a few reported cases in the literature of the occurrence of Central Serous Chorioretinopathy (CSCR) after tadalafil use [6] .

However, the resolution of CRSC after cessation of tadalafil is very characteristic in these cases. Which make the Prognosis of this Drug-induced CSCR good. This characteristic is present in our case, which reinforces our diagnosis.

### **Conclusion:-**

In the presence of reported cases of Central Serous Chorioretinopathy (CRSC) following tadalafil intake and the excellent prognostic after stopping it , it appears reasonable to look for the use of PDE5-inhibitors in the patient's medical history.

### **References:-**

1. Ross A, Ross AH, Mohamed Q. Review and update of central serous chorioretinopathy. *Curr Opin Ophthalmol.* 2011;22(3):166-73.

2. Haimovici R, Koh S, Gagnon DR, Lehrfeld T, Wellik S. Central serous chorioretinopathy case-control study group. Risk factors for central serous chorioretinopathy: case-control study group. *Ophthalmology* 2004;111:244—9.
3. Carter JE. Anterior ischemic optic neuropathy and stroke with use of PDE-5 inhibitors for erectile dysfunction: cause or coincidence? *J Neurol Sci.* 2007;262(1–2):89–97.
4. Cordell WH, Maturi RK, Costigan TM, Marmor MF, Weleber RG, et al. (2009) Retinal effects of 6 months of daily use of tadalafil or sildenafil. *Arch Ophthalmol* 127: 367-373.
5. Foresta C, Caretta N, Zuccarello D, Poletti A, Biagioli A, Caretti L, et al. Expression of the PDE5 enzyme on human retinal tissue: new aspects of PDE5 inhibitors ocular side effects. *Eye.* 2008;22(1):144–9.
6. Alsarhani A, Alarfaj M, Alhoutan K, Alsubaie H. Central Serous Chorioretinopathy Associated with Tadalafil. *Case Rep Ophthalmol.* 2022 Nov 28;13(3):999-1002. doi: 10.1159/000527356. PMID: 36605047; PMCID: PMC9808129.