

## Leaking beehive honey sign an unusual case of central serous chorioretinopathy

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### Abstract

Central serous chorioretinopathy is the fourth most common retinopathy after age-related macular degeneration, diabetic retinopathy and branch retinal vein occlusion. It's usually unilateral and affect young or middle-aged men with M: F - 3:1 whereas female tend to be older. It's a common ocular disease characterized by decompensation of the retinal pigment epithelium, which results in neurosensory retinal detachment, serous pigment epithelium detachment, and retinal pigment epithelium atrophy. Early identification and treatment are needed to prevent complications.

Conclusion: Patients may require early intervention to prevent loss of photoreceptor layer integrity. Though Majority of cases are self-resolving, mineralocorticoid antagonists can be given for faster resorption of subretinal fluid. Photo Dynamic Therapy may be required for cases of chronic Central Serous Chorioretinopathy.

**Keywords:** Central serous chorioretinopathy; Photoreceptor integrity; Leaking beehive sign; Sleep apnoea; Photo Dynamic therapy

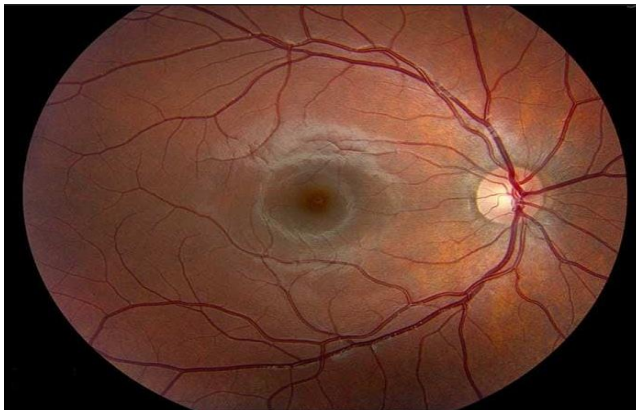
### 1. Introduction

- Central serous chorioretinopathy is the fourth most common retinopathy after age-related macular degeneration, diabetic retinopathy and branch retinal vein occlusion.
- Central serous chorioretinopathy was first identified and described in 1866 by von Graefe, who referred to the disease as “recurrent central retinitis” [1].
- It's a common ocular disease characterized by decompensation of the retinal pigment epithelium, which results in neurosensory retinal detachment, serous pigment epithelium detachment, and retinal pigment epithelium atrophy” [2]. It's usually unilateral and affect young or middle-aged men with M: F - 3:1 whereas female tend to be older.
- Risk factors - Helicobacter pylori infection, Renal dialysis, systemic hypertension, psychology stress , pregnancy and sleep apnoea syndrome.
- Early identification and treatment is needed to prevent loss of photoreceptor layer integrity , Macular degeneration and CNVM.

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## 2. Case presentation

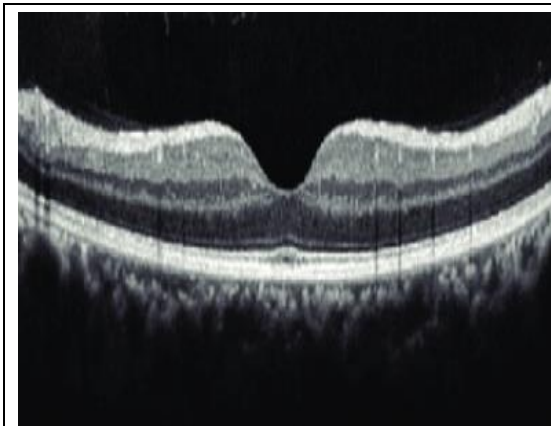
- A 36 year old female who is a k/c/o Hypertensive since 6years presented with complaints of diminution of vision in the left eye (OS) for the past 10 days.
- On ocular examination  
BCVA - RE 6/12  
LE Hand movements close to face  
Colour Vision - RE Normal
- On slit lamp examination  
RE appears externally quiet with clear corneas, normal anterior chambers, reacting pupils with normal iris morphology and transparent lens.  
LE appears externally quiet with clear corneas, normal anterior chambers, normal iris morphology and transparent lens with Grade 1 RAPD
- Amsler grid Normal RE
- On funduscopy evaluation done by dilating the patient eyes with tropicamide 0.8 % with phenylephrine 5% eyedrops 1drop for 3 times 10 minutes apart, fundus of  
RE - With in normal limits  
LE -Normal optic disc with a well demarcated dome shaped 3DD elevation of serous retinal with photoreceptor layer detachment subfoveally, which is seen hanging from the outer retinal layer with subretinal fibrin (Leaking Beehive Honey Sign) suggestive of central serous chorioretinopathy.



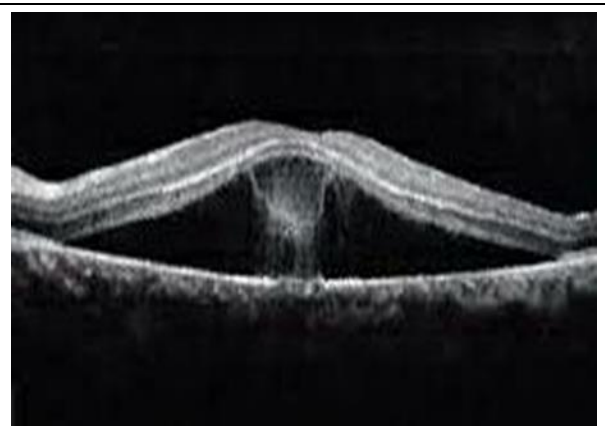
**Figure 1** Fundus picture of RE :Normal



**Figure 2** Fundus picture of LE: Showing collection of subretinal fluid



**Figure 3** Spectral domain OCT of RE



**Figure 4** Spectral domain OCT of LE

Spectral domain optical coherence tomography of RE is normal with all layers intact.

Spectral domain optical coherence tomography of LE revealing subretinal fluid accumulation suggestive of central serous chorioretinopathy and photoreceptor layer detachment with the fibrin subfoveally from the outer layer of the retina

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### 3. Discussion

- Central Serous Chorioretinopathy is a multifactorial disease without a known mechanism of action.
- It is most strongly associated with hypercortisolism and is thought to occur because of leakage from choriocapillaris, choroidal hyperpermeability and secondary RPE dysfunction leading to serous retinal detachment.
- The majority of cases of CSCR resolve spontaneously, so observation is done for 3-6 months. In some cases, CSCR persists beyond 6 months or recurs. Chronic CSCR leads to macular degeneration, foveal atrophy, and RPE changes and requires treatment to preserve vision.
- The mainstay of treatment is photodynamic therapy, however treatment with subthreshold micropulse laser or mineralocorticoid antagonists such as eplerenone or spironolactone and Low-dose aspirin showed faster improvement in BCVA are gaining importance.

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### 4. Conclusion

- The interesting feature is it's a female patient with the photoreceptor layer detachment subfoveally, it is seen hanging from the outer retinal layer with subretinal fibrin, looking similar to the leaking honey from the beehive
- This is an important prognostic indicator, and the patient may require early intervention to prevent loss of photoreceptor layer integrity and complications.
- Majority of cases are self-resolving, but mineralocorticoid antagonists can be given for faster resorption of subretinal fluid.
- Photo Dynamic Therapy may be required for cases of chronic Central Serous Chorioretinopathy.

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### Compliance with ethical standards

#### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

#### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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### References

- [1] Semeraro F, Morescalchi F, Russo A, et al. Central Serous Chorioretinopathy: Pathogenesis and Management. Clin Ophthalmol. 2019;13:2341-2352. Published 2019 Dec 2. doi:10.2147/OPHTH.S220845
- [2] Sekaran S, Madhivanan N, Ramesh PV, Nivean PD. Leaking Beehive Honey Sign – An unusual occurrence of the photoreceptor layer detachment in a case of central serous chorioretinopathy. Indian J Ophthalmol Case Rep 2022;2:868.
- [3] Liegl R, Ulbig MW. Central serous chorioretinopathy. Ophthalmologica. 2014;232(2):65–76. doi: 10.1159/000360014 [PubMed] [CrossRef] [Google Scholar]
- [4] Wang M, Munch IC, Hasler PW, Prünke C, Larsen M. Central serous chorioretinopathy. Acta Ophthalmol (Copenh). 2008;86(2):126–145. doi: 10.1111/j.1600-0420.2007.00889.x [PubMed] [CrossRef] [Google Scholar]
- [5] Mudvari SS, Goff MJ, Fu AD, et al. The natural history of pigment epithelial detachment associated with central serous chorioretinopathy. Retina. 2007;27(9):1168–1173. doi: 10.1097/IAE.0b013e318156db8a [PubMed] [CrossRef] [Google Scholar]
- [6] N V B, Gürlü VP, Esgin H. Long-term macular function in eyes with central serous chorioretinopathy. Clin Experiment Ophthalmol. 2005;33(4):369–372. doi: 10.1111/j.1442-9071.2005.01027.x [PubMed] [CrossRef] [Google Scholar]

- [7] Loo RH, Scott IU, Flynn HW, et al. Factors associated with reduced visual acuity during long-term follow-up of patients with idiopathic central serous chorioretinopathy. *Retina*. 2002;22(1):19–24. doi: 10.1097/00006982-200202000-00004 [PubMed] [CrossRef] [Google Scholar]
- [8] Otsuka S, Ohba N, Nakao K. A long-term follow-up study of severe variant of central serous chorioretinopathy. *Retina*. 2002;22(1):25–32. doi: 10.1097/00006982-200202000-00005 [PubMed] [CrossRef] [Google Scholar]
- [9] Sahu DK, Namperumalsamy P, Hilton GF, de Sousa NF. Bullous variant of idiopathic central serous chorioretinopathy. *Br J Ophthalmol*. 2000;84(5):485–492. doi: 10.1136/bjo.84.5.485 [PMC free article] [PubMed] [CrossRef] [Google Scholar]