



CENTRAL SEROUS RETINOPATHY IN PREGNANCY

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Abstract: Central serous retinopathy (CSR) is characterized by neurosensory retinal detachment, with associated retinal pigment epithelial (RPE) detachment, RPE leakage, as well as RPE and choroidal hyper-permeability. In general, CSR is a sporadic, self-limiting disease with a predilection for young or middle-aged adult males with type A personalities¹. A 27 year old female presented with blurred vision and distortion of images in her left eye since one week in the seventh month of her second pregnancy. Ophthalmic examination revealed a normal right eye and left eye showed a circumscribed elevation of the retina measuring two disc diameters in size involving the foveal center with subretinal exudates. Stratus domain-Optical coherence tomography (SD-OCT) was done which showed a serous retinal detachment at macula. CSR although not typical has been reported to occur during pregnancy and is known to be self-limiting. It is a recognized complication of pregnancy. CSR in pregnancy has been reported to occur in any trimester of pregnancy. This case report reaffirms the prevalence of CSR in pregnancy and its self-limiting nature. Accurate diagnosis of CSR via clinical examination and ancillary studies, to differentiate from other similar conditions, as the cause of visual disturbances during pregnancy allows for appropriate counseling of the patient.

Keywords: Central serous retinal retinopathy, CSR, Pregnancy.

INTRODUCTION

Central serous retinopathy (CSR) is characterized by neurosensory retinal detachment, with associated retinal pigment epithelial (RPE) detachment, RPE leakage, as well as RPE and choroidal hyper-permeability¹. In general, CSR is a sporadic, self-limiting disease with a predilection for young or middle-aged adult males^{2,3} with type A personalities⁴, presumably due to elevated circulating cortisol and epinephrine that affect auto regulation of the choroidal circulation⁵.

Although CSR is much more common in males than in non-pregnant females with a ratio of 10:1, pregnancy has been shown to be an independent risk factor for CSR, with an odds ratio of 7.1¹. It is, therefore, important to consider CSR in a pregnant patient who presents with the following symptoms: decreased visual acuity, central scotoma, micropsia, or metamorphopsia.

Case report:

A 27 year old female presented with blurred vision and distortion of images in her left eye since one week in the seventh month of her second pregnancy. On examination the visual acuity of right eye was 6/6 and in the involved left eye it was 6/12. Amslers Grid testing, dilated fundus examination and Stratus domain-Optical coherence tomography (SD-OCT) were done

RESULTS

Amsler's grid of right eye was normal, left eye showed distortion of the central area. Dilated fundus examination revealed a normal right eye and left eye showed a circumscribed elevation of the retina measuring two disc diameters in size involving the foveal center with subretinal exudates [Figure A and B]. Stratus domain-Optical coherence tomography (SD-OCT) was done which showed a serous retinal detachment at macula in left eye [Figure C]. Fundus fluorescein angiography was deferred due to her pregnancy. OCT has a theoretical advantage over IVFA because the fetus is not exposed to fluorescein dye¹.

The patient returned for a follow up after a week, reported an improvement in vision but distortion persisted. Fundus examination and OCT of left eye revealed a persisting retinal detachment with reduction in fluid. A month later patient's visual acuity had improved to 6/9. Fundus examination showed a decrease in the size of the serous retinal detachment measuring one disc diameter and resolution of the subretinal deposits. OCT showed a resolving serous detachment [Figure D]. Patient was lost to follow up after this.

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Figure. A and B: Fundus photo and red free Fundus photo of Left eye showing elevated lesion in the posterior pole.

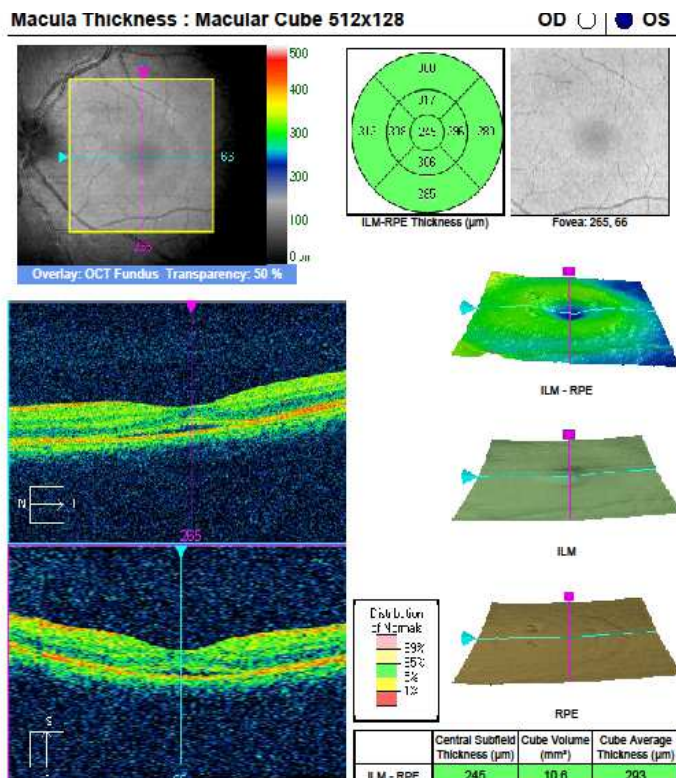


Figure. D: OCT of the Left eye showing decrease in the fluid level with persisting central serous detachment after 1 month.

DISCUSSION

CSR although not typical, has been reported to occur during pregnancy and is known to be self-limiting. It is a recognized complication of pregnancy⁶⁻⁸. CSR in pregnancy has been reported to occur in any trimester of pregnancy. The etiology of CSR in pregnancy is unknown, though hormones (thought to be related to level of endogenous steroids), coagulation and hemodynamic changes may play a role⁹. In most cases CSR resolves within a few months and visual acuity returns to normal, although patients may continue to experience metamorphopsia, micropsia and color vision abnormalities to some degree. The presence of subretinal exudates with Serous retinal detachment is more often seen in CSR associated with pregnancy (90%) than in non-pregnant females and males (less than 20%)^{9,11}. This exudate seems to be white or grey-white and represent fibrin in the subretinal space^{2,9}. This patient had typical symptoms and biomicroscopic findings of idiopathic central serous retinopathy during an otherwise uncomplicated pregnancy. The subretinal exudate which is common in pregnancy with CSR was a significant finding in this patient. Subretinal exudates are reported to be seen in high frequency in pregnant patients¹¹, our report is in accordance with previous studies.

CSR in pregnancy is rare, 61% of which occurs in the third trimester. The incidence of CSR is commonest in

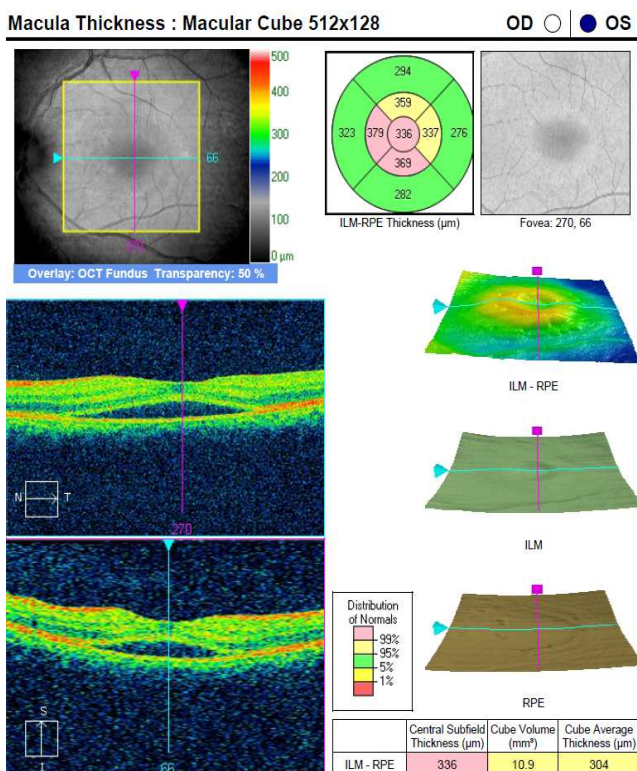


Figure. C: OCT of the Left eye showing Central area of serous retinal detachment at macula

the third trimester with an incidence of 61%, 26% in the second trimester and 13% in the first trimester¹². CSR typically resolves spontaneously, with resorption of subretinal fluid and exudates within 1 to 6 months. Visual acuity returns to normal or near-normal (20/25) in most patients (80%-90%)¹³. Our study was in accordance with the above observations.

CONCLUSION

This case report reaffirms the prevalence of CSR in pregnancy and its self-limiting nature. Accurate diagnosis of CSR via clinical examination and ancillary studies, to differentiate from other similar conditions, as the cause of visual disturbances during pregnancy allows for appropriate counseling of the patient. With observation as the initial management, the natural history in CSR is good. Hence early and correct diagnosis of this condition may avert superfluous diagnostic and therapeutic measures in pregnancy.

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