

Assessment of the Posterior Segment of Ocular Behçet's Uveitis with Opaque Ocular Media by Using Swept Source OCT Angio

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INTRODUCTION

Behçet's disease is a multisystem disorder named after the Turkish dermatologist, Hulusi Behçet (1889–1948), who in 1937 recognized and reported a triad of symptoms: recurrent intraocular inflammatory episodes with oral and mucosal ulcerations, This disorder may have devastating consequences for the eyes, and has therefore attracted a great deal of attention. The disease can affect both the anterior and posterior portions of the globe, the classic finding in ocular BD is recurrent, sterile hypopyon described by Behcet, and it is a Dramatic finding that is easily detected by non-ophthalmic physicians.

METHODS

We retrospectively review a 49 y old female patient, with history of bilateral chronic ocular Behcet Uveitis. The patient was treated with topical steroid drops for recurrent bilateral chronic anterior uveitis and she recently reported a significant drop in her vision, Examination showed bilateral anterior uveitis of +2 cells with bilateral +3 posterior subscapular cataract, in addition to iris posterior synechia and fine keratic precipitates on the corneal endothelium in both eyes (**Figure 1**). The examination of the posterior segment was not informative due to the hazy view that caused by opaque ocular media (Posterior Subscapular Cataract) that found in both eyes.

RESULTS

A decision was made to examine the posterior segment by using 1050 nm TRITON Swept Source OCT which has a wave length able to penetrate a dense cataract better than spectral domain OCT. Multiple Swept Source OCT images were taken in addition to 3D cuts that showed severe hidden vitritis with increase in subfoveal choroidal thickness to ($448\text{ }\mu\text{m} \pm 80\text{ }\mu\text{m}$ in right eye) and ($649\text{ }\mu\text{m} \pm 60\text{ }\mu\text{m}$ in left eye) (**Figure 2**) that reflects a high hidden activity of the disease in the posterior segment. the patient was treated with high dose intravenous methylprednisolone (1 g IV), administered over 1 hour for 3 days followed by initiation of oral prednisolone, 1 mg/kg/day that gradually tapered. The Swept Source OCT images were repeated after 2 weeks of treatment, the new images showed a significant improvement in Vitritis with improvement in subfoveal choroidal thickness in the right eye to ($401\text{ }\mu\text{m} \pm 65\text{ }\mu\text{m}$) and in the left eye to ($377\text{ }\mu\text{m} \pm 50\text{ }\mu\text{m}$) (**Figure 3**).

CONCLUSION

SS-OCT is a noninvasive reproducible imaging technique that allows enhanced visualization of the posterior segment of the eye with opaque media (especially in Uveitis cases) and in measurement of choroidal thickness that could be superior to B-scan ultrasound, which has low resolution and can be less reliable when used by inexperienced examiners.

In our case, the SS-OCT images were informative in detection of acute posterior segment complications of Behcet (Vitritis) and in evaluation of the choroidal thickness that increases in active and quiescent phases of posterior uveitis. Though it may be difficult to delineate the inner edge of the suprachoroidal space, especially during acute inflammation but choroidal thickness remains a good parameter that can be used to characterize different disease entities and in monitoring of the posterior pole inflammatory disorders before and after the treatment.

Fig 1

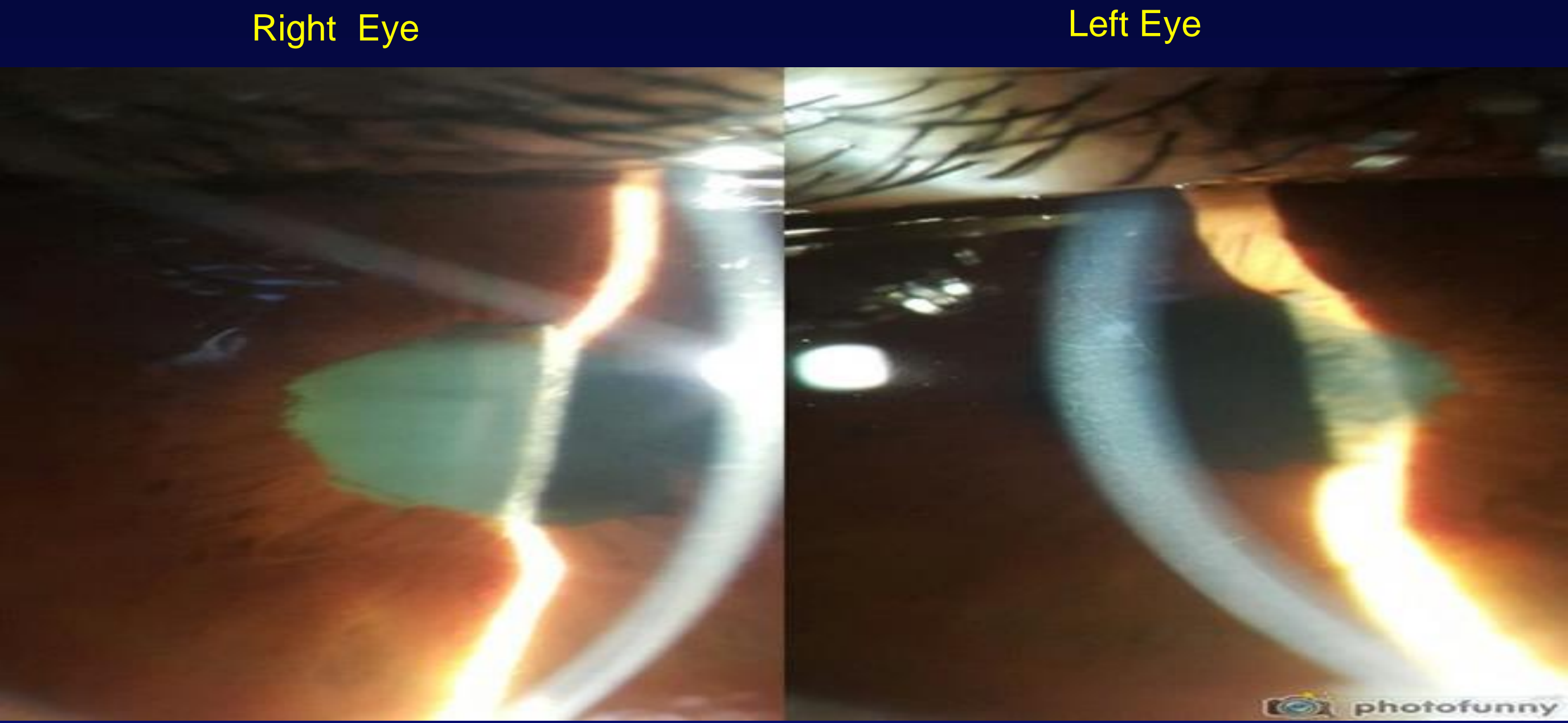
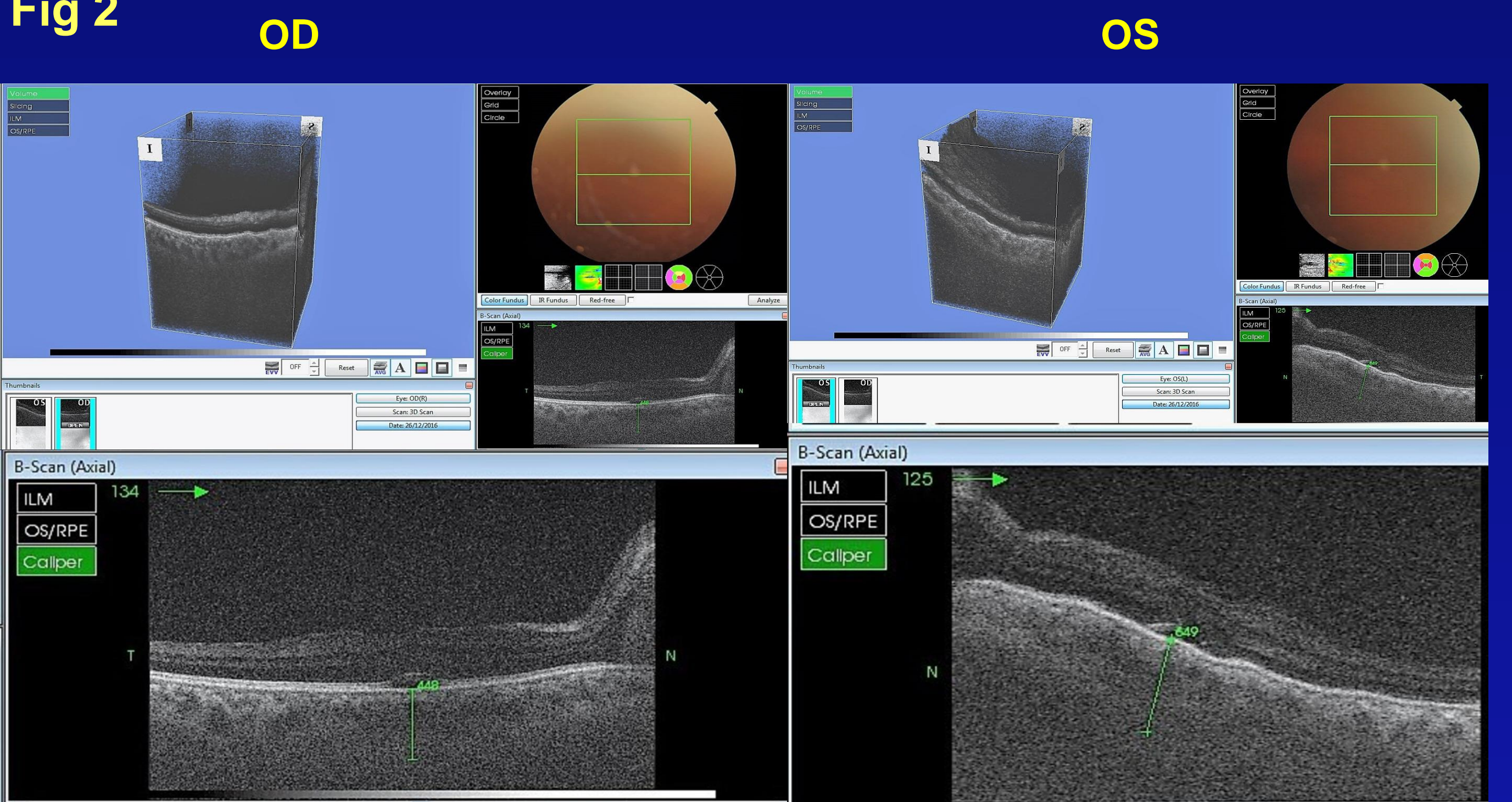
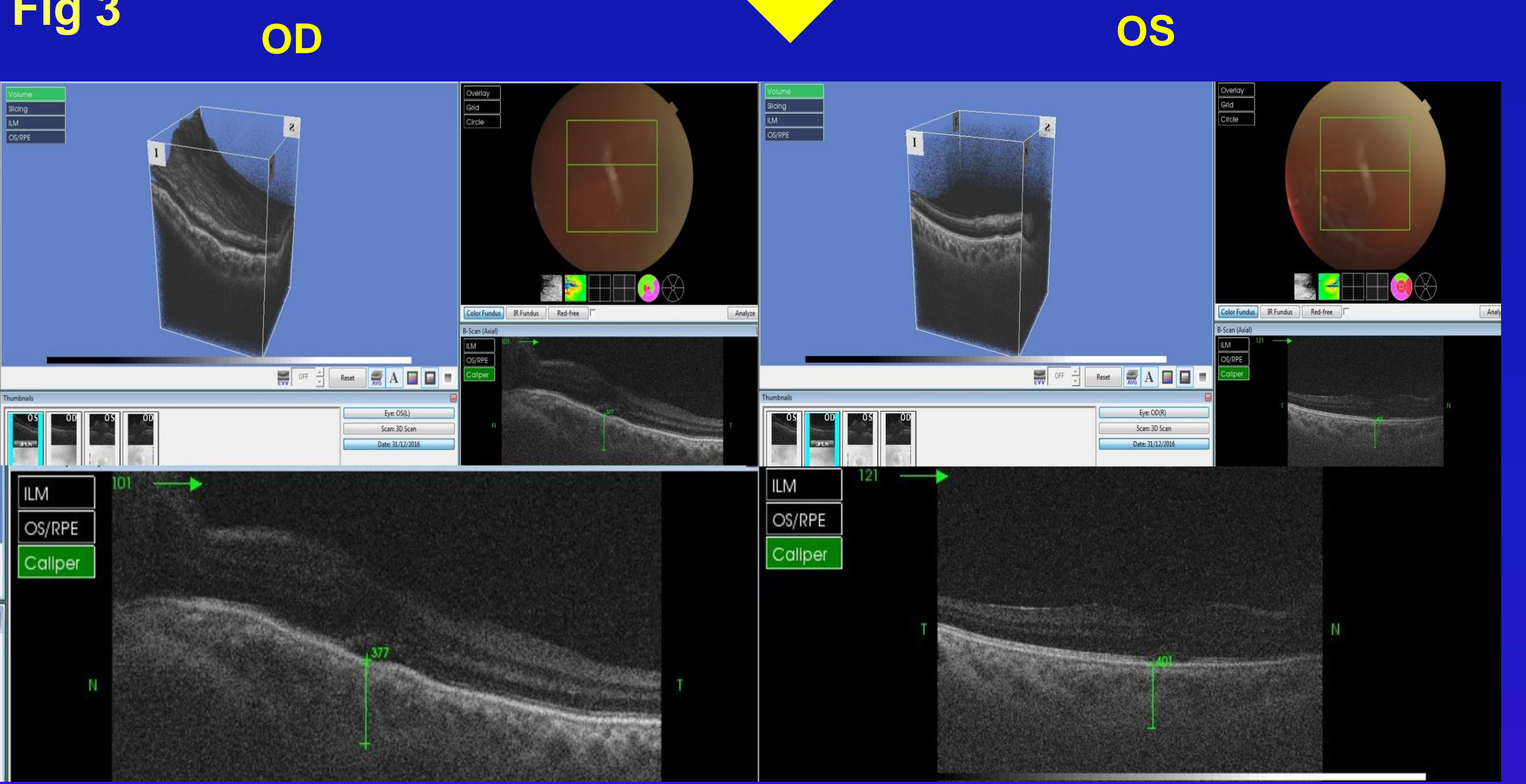


Fig 2



SS-OCT images for the right and left eye that showing dense vitritis and increase in choroid thickness

Fig 3



SS-OCT images for the right and left eye after pulse therapy with methylprednisolone with resolution of vitritis and decrease in choroidal thickness

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