

**Role of OCT Angiography in Monitoring
Morphological Changes of Choroidal
Neovascularization in Response to Anti-angiogenic
Treatment**

Thesis

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Degree in Ophthalmology

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Summary

CNV is an invasion of tissue with a prominent vascular component. It is a key of multiple pathologic change, causing severe vision loss.

It is caused mainly by Age-Related Macular Degeneration, pathologic myopia, Ocular Histoplasmosis Syndrome (OHS), angioid streaks, multifocal choroiditis, idiopathic CNVM, choroidal rupture, Heavy focal laser, Serpeginous choroiditis, Sympathetic ophthalmia, and other rare conditions.

CNV is diagnosed by various methods of investigations as FFA, OCT, and OCTA. OCTA is the best method for diagnosis of CNV as it allows for the direct visualization of the retinal and choroidal vasculature, fast, noninvasive, dye-free, so there is no systemic side effects compared with FFA.

In this study we evaluated CNV activity by OCT according to SRF, PED, CME and retinal thickening.

We evaluated CNV by OCTA according to :

- CNV size and flow area.
- CNV type : type 1 or type 2.
- CNV patterns : DN, LN, mixed net or unidentifiable.
- CNV activity by peripheral looping ,arborization, anastomosis and perivascular halo.

CNV is treated by various types of treatment as: Retinal Laser Photocoagulation, surgical resection, macular translocation , PDT, and anti-VEGF drugs. The later is the best option.

In our study, we treated the CNV patients by intravitreal injections of anti-VEGF therapy and followed up the regression of activity by OCT and OCTA. Our study included 20 patients, 18 of them show gradual regression of activity along the course of 3 successive doses of intravitreal injections of anti-VEGF therapy, while only 2 patients show complete resolution after first injection of anti-VEGF agent, according to OCT and OCTA criteria of activity of CNV

So, OCT and OCTA are complementary to each others for following up the response of CNV activity to treatment with anti-VEGF therapy.

