

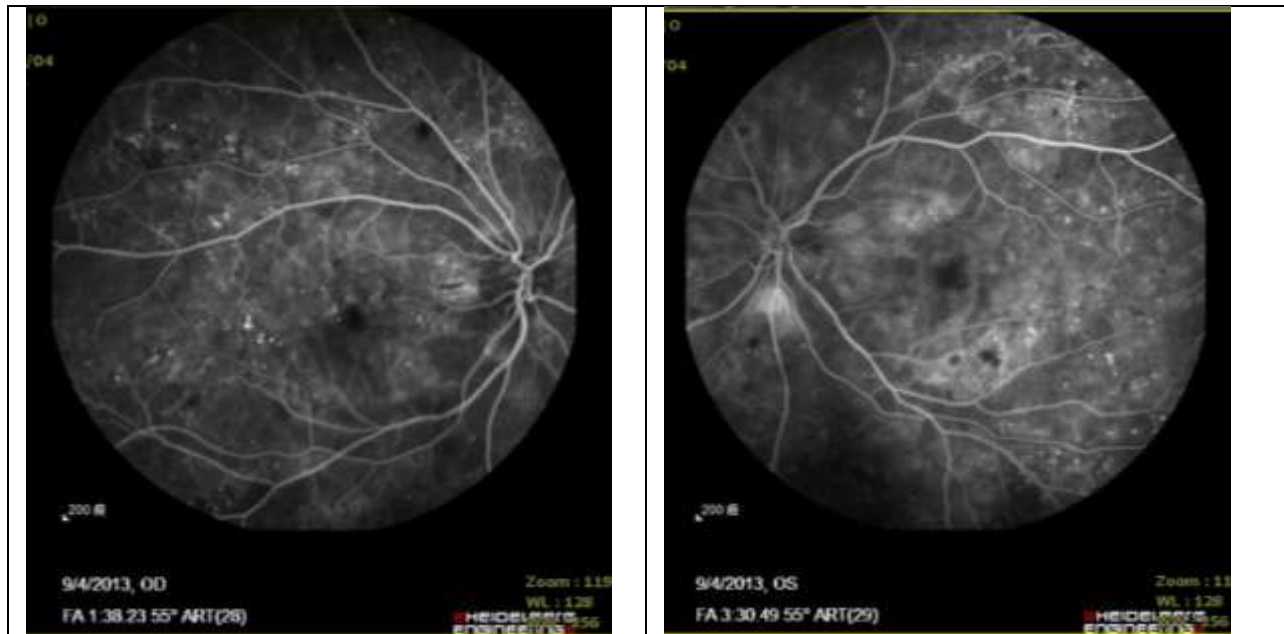
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Case

A 56 year-old female with a 10 years history of Type 2 Diabetes Mellitus presented to our Ophthalmology Outpatient Department. She complained of blurred vision for 2 months. Progressive blurred vision noted which cannot be corrected with eyeglasses and become severe recently. She has poorly controlled diabetes with an HbA1c of 15.1%. Her eye examination showed BCVA(best corrected visual acuity) 0.2/0.3.IOP(intraocular pressure)16/17.

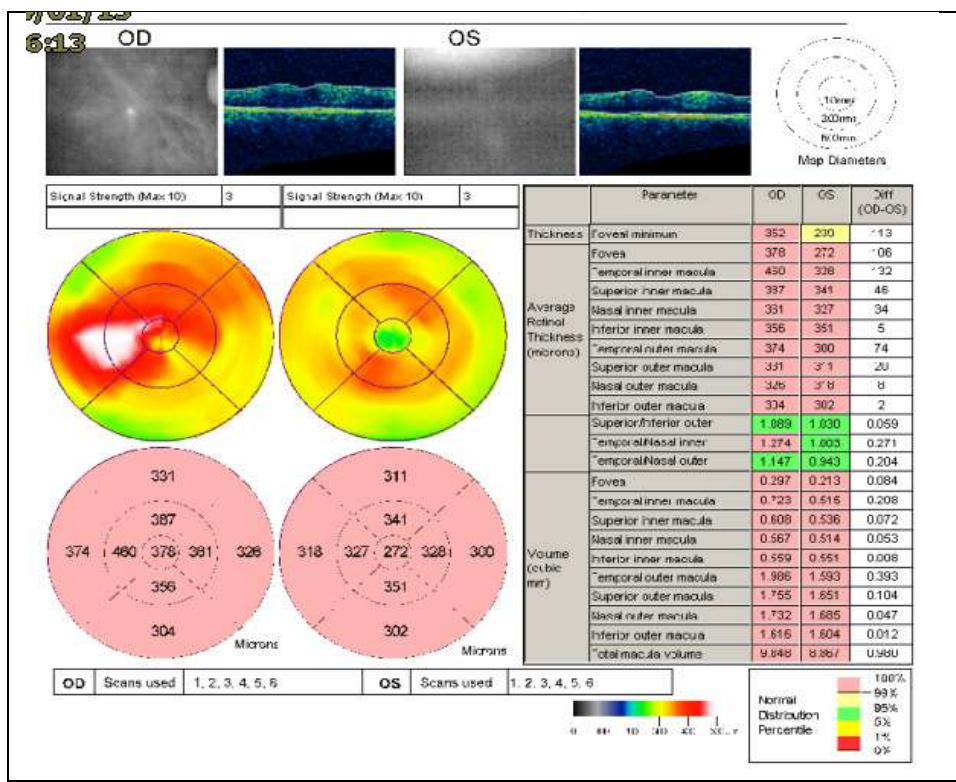
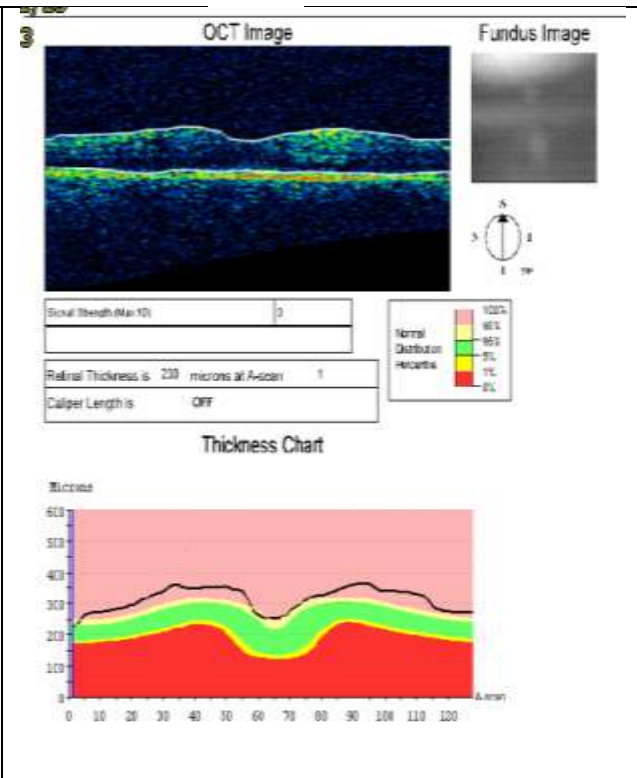
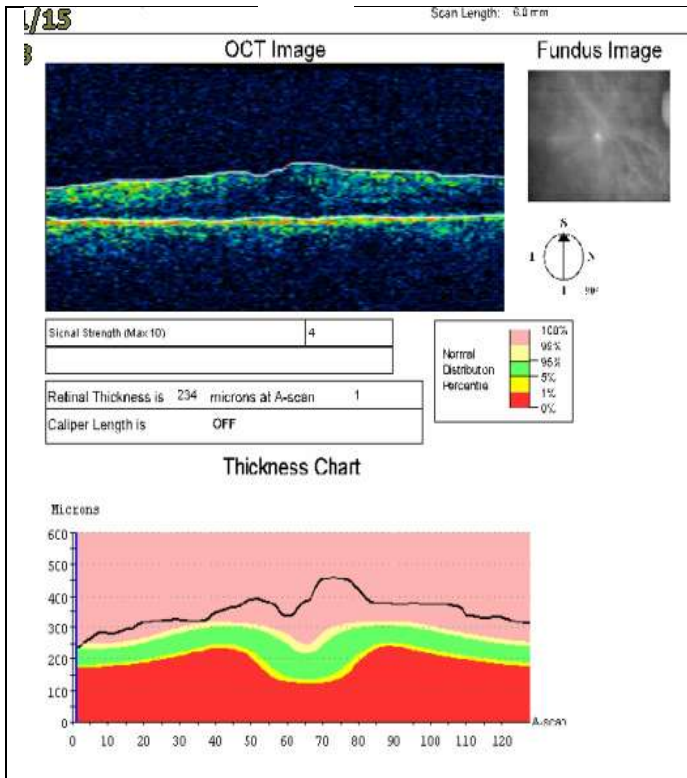
Fluorescence angiography(FAG) and OCT image were conducted. FAG showed both eyes proliferative diabetic retinopathy while OCT image showed both eyes significant macular edema. OD central retinal thickness was 378 micrometer.

Patient requested for intravitreal anti-VEGF or laser therapy.



OD

OS



Patients/Population:

Patients with diabetic macular edema

Intervention:

Intravitreal anti-VEGF

Comparison:

Laser therapy

Outcomes:

Improvement of visual activity, cost-effectiveness, and safety of intravitreal anti-VEGF

Question :

Does intravitreal anti-VEGF is a better choice for treatment of diabetic macular edema in the aspect of safety, cost-effectiveness and the improvement of visual activity compared to laser therapy?

Paper 1

Virgili G., Parravano M., Menchini F., & Brunetti M.(2012).Antiangiogenic therapy with anti-vascular endothelial growth factor modalities for diabetic macular oedema. *The Cochrane Library 2012, Issue 12: CD007419*.doi10.1002/14651858

Paper2

Ning Cheung, Ian Y. Wong, & Tien Y. Wong.(2014). Ocular Anti-VEGF Therapy for Diabetic Retinopathy: Overview of Clinical Efficacy and Evolving Applications.*Diabetes Care 2014;37:900–90*. doi: 10.2337/dc13-1990

Paper3

Ingrid Zechmeister-Koss, & Mirjana Huic(2012). Vascular endothelial growth factor inhibitors(anti-VEGF) in the management of diabetic macularoedema: a systematic review. *Br J Ophthalmol 2012;96:167e178*. doi:10.1136 /bjophthalmol-2011-300674

Paper 4

Angie HC Fong, & Timothy YY Lai(2013). Long-term effectiveness of ranibizumab for age-related macular degenerationand diabetic macular edema. *Clinical Interventions in Aging 2013;8 467–483*.doi: 10.2147/CIA.S36811

Paper5

Ursula Schmidt-Erfurth, Gabriele E. Lang, Frank G. Holz, Reinier O. Schlingemann, Paolo Lanzetta, Pascale Massin,.....& Paul Mitchell.(2014). Three-Year Outcomes of Individualized Ranibizumab Treatment in Patients with Diabetic Macular Edema. *Ophthalmology* 2014;121:10451053. doi:10.1016/j.ophtha.2013.11.041.

Paper 6

Paul Mitchell and Tien Yin Wong(2013).Management Paradigms for Diabetic Macular Edema. *American Journal of Ophthalmology* 2014 Mar;157(3):505-13.e1-8.doi: 10.1016/j.ajo.2013.11.012

Paper 7

Ahmed M Abu El-Asrar. Dr. Ahmed Abu El-Asrar.(2013).Evolving Strategies in the Management of Diabetic Retinopathy. *Middle East Afr J Ophthalmol.* 2013 Oct-Dec; 20(4): 273–282.doi: 10.4103/0974-9233.119993

Paper 8

Michael J. Elman, MD, Haijing Qin, MS, Lloyd Paul Aiello, MD, Roy W. Beck, MD,Neil M. Bressler, MD, Frederick L. Ferris III, ...& Michele Melia, ScM(2012)Intravitreal Ranibizumab for Diabetic Macular Edema with Prompt versus Deferred Laser Treatment. *American Academy of Ophthalmology* 2012 Nov;119(11):2312-8. doi: 10.1016/j.ophtha.2012.08.022.

Paper 9

K Ghasemi Falavarjani & QD Nguyen.(2013).Adverse events and complications associated with intravitreal injection of anti-VEGF agents:a review of literature. *Eye (2013) 27, 787–794;* doi:10.1038/eye.2013.107

Paper 10

Neil M. Bressler, M.D., Roy W. Beck, M.D., Ph.D., & Frederick L. Ferris III, M.D. (2011).Panretinal Photocoagulation for Proliferative Diabetic Retinopathy. *N Engl J Med* 2011;365:1520-6.doi: 10.1056 /NEJMct0908432