

Diabetes Complications:

Diabetic Retinopathy



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Mr. RH is a fifty year old male who was complaining of gradual vision loss in both eyes more so on his right than on his left. He claimed that he was otherwise completely healthy but that always prompts me to ask the next question which was when you were last seen by your family doctor and he had not been seen by a doctor for over ten years. My functional inquiry it was positive that he had quote “problems with his

big toe”. On examination, his visual acuity was 2200 which is the big E in his right eye. His left was much better at twenty thirty.

These are his photographs especially in his right eye you can see that there is extensive lipid exudation in his retina along the blood vessels especially nasally in the retina, but also along one of the blood vessels into the fovea. There were multiple hemorrhages and



CASE STUDY

Mr. R.H.

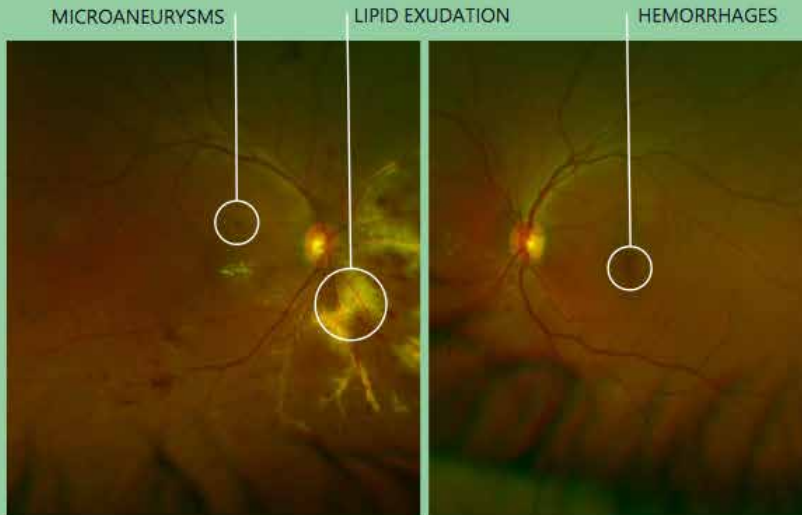
- ✓ 50 year old male
- ✓ Gradual vision loss on both eyes but R>L
- ✓ Otherwise healthy but has not seen a physician in over 10 years
- ✓ Functional Inquiry: “Problems with my big toe”

Visual acuity:

RIGHT EYE
20 / 200

LEFT EYE
20 / 30

Note extensive lipid exudation in the R retina with multiple hemorrhages and microaneurysms in both eyes.



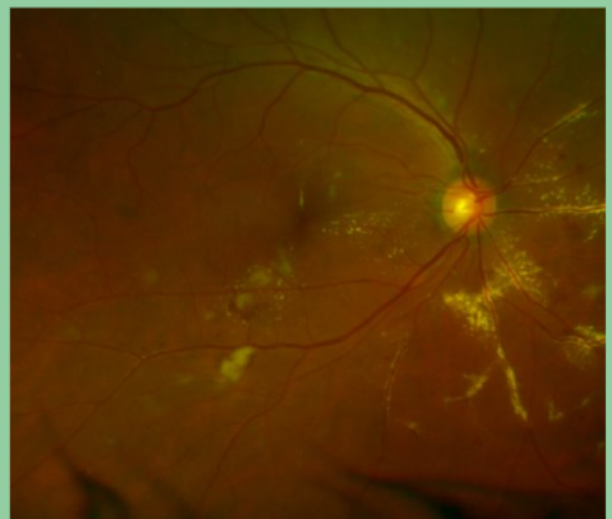
A STAT random blood sugar was 25 and his A1C was 15
This is a case of undiagnosed diabetes first presenting with vision loss due to diabetic macular edema.

microaneurysms in both eyes. You can see the disease is quite asymmetric. His left eye is much better off. The first test that I sent him for was a stat random blood sugar which came back at 25 and his A1C was also significantly

elevated at 15. So this is a case of undiagnosed diabetes first presenting with vision loss to me as a retina specialist due to diabetic macular edema.

He underwent eight monthly intra-vitreous injections

- ✓ He underwent 8 monthly intra-vitreous injections of Aflibercept with improvement of his vision to 20/30 in his R eye.
- ✓ He continues to require maintenance injections to both eyes every 3 months.
- ✓ The “problem” with his big toe was gangrene!
- ✓ He is now under good systemic control with A1C < 7.



of Afibercept which is one of the anti-VEGF agents that we have access to. He had a remarkable improvement in the visual acuity in his right eye to 2030 and you can see on the color photograph that although there is still some lipid molecules present the degree of exudation is much less and this is what accounts for the improvement in his visual acuity to 2030. As I indicated, however, these injections are in no way a cure for this disease and he continues to require maintenance injections to both eyes every three months to prevent the recurrence of the diabetic macular edema. As it turns out the problem with his big toe was gangrene and that was treated appropriately. He is now under excellent systemic control and maintains A1Cs less than seven.

So in closing some clinical pearls. Appropriate

screening of our diabetic patients whether they are type 1 and type 2. Good systemic control of blood sugar, hypertension, dyslipidemia, and renal function and timely treatment involving intra-vitreous anti-VEGF injections, laser photocoagulation when appropriate and surgical intervention when necessary will help to significantly reduce the risk of vision loss in our patients with diabetes. This is a photograph of a patient who I treated 25 years ago with Pan-retinal laser photocoagulation and despite the extensive scarring from his laser photocoagulation if you look right dead center in his macula it is clear his optic disc is normal and he continues to do well with visual acuity of 2030 and that is our goal in the treatment of our patients with diabetic retinopathy.



Clinical Pearls

Appropriate screening

Good systemic control of blood sugar, hypertension, dyslipidemia and renal function

Timely treatment involving intra-vitreous anti-VEGF injections, laser photocoagulation when appropriate and surgical intervention when necessary