UNILATERAL NEOVASCULARIZATION OF THE FOVEA IN A PATIENT WITH TYPE 2 DIABETES

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PURPOSE
To report a unique case of unilateral neovascularization at the fovea (NVF) in a patient with type 2 diabetes.

CASE
A 59-year-old female with type 2 diabetes was referred for diabetic retinopathy assessment. Fundus examination of both eyes revealed retinal neovascularization elsewhere suggestive of proliferative diabetic retinopathy. The right eye macula showed an abnormal tissue tuft at the fovea, fibrovascular in appearance, suggestive of NVF. This was confirmed using multimodal imaging, including Optical coherence tomography (OCT), OCT angiography (OCTA) (Figure 1 A,B), and intravenous fluorescein angiography (IVFA) (Figure 2 A,B).

REFERENCES

DISCUSSION
New vessel growth, or neovascularization, is a diagnostic feature of proliferative diabetic retinopathy. Neovascularization almost always occurs at the optic disc and/or along vascular arcades adjacent to areas of nonperfusion but is rarely noted at fovea. This is due to the avascular nature of the fovea with the choroid generally compensating for any macular ischemia. However, choroidal blood flow is thought to be markedly reduced in patients with diabetes, predisposing them to NVF. Furthermore, no difference is seen in the occurrence of NVF between type 1 and type 2 diabetes. OCTA is a relatively new, but simple, quick, non-invasive technique that can image retinal vasculature with high resolution. Advances in OCTA may impact clinical staging of retinal pathologies due to earlier visualization of vascular changes.

LEARNING POINTS
1. NVF can occur in type 1 or 2 diabetes
2. Multimodal imaging helps increase diagnostic certainty of NVF
3. OCTA is a simple, fast, non-invasive technique, that may change the staging of PDR
4. Patients with PDR and NVF can improve with anti-VEGF injections and/or pan-retinal photocoagulation