A Comparison of Two Retinal Masses
Shauna E. Berry, DO; Clint W. Kellogg, DO; Kathryn E. Ireland, DO
NSUCOM/Larkin Community Hospital, South Miami, FL
Roberto Beraja, MD
Larkin Community Hospital, South Miami, FL 33143

Introduction
Several lesions in the retina can produce a mass effect simulating a malignancy such as a choroidal melanoma or a metastatic tumor, among these lies a broad differential diagnosis including, wet age-related macular degeneration, proliferation of the retinal pigmented epithelium, choroidal melanoma, congenital hypertrophy of the retina and RPE, and peripheral exudative hemorrhagic chorioretinopathy. It is important to take a detailed history and perform a thorough clinical exam with the appropriate diagnostic tests to prevent misdiagnosis and inappropriate treatment.

Case 1
A 76 year-old Hispanic male presents with a 40-year history of hand motion vision in the right eye (OD). He states this is his first dilated eye exam and he has recent noticed a central scotoma over the past month. He denies smoking, alcohol, and drug use. His only medication is lisinopril. His history is remarkable for a benign colon and renal mass removed a few years ago. He denies any family history of poor vision or malignancy. BCVA: OD: HM; OS: 20/20 IOP: OD 10; OS 12 Pupils: APD OD External anterior segment exam: +2 NS OU, unremarkable OU Fundus: OD: C/D 0.6, Three pigmented elevated masses in the posterior pole, hemorrhage, and lipid exudates. Drusen and RPE changes also present. OS: C/D 0.6, unremarkable findings Tests ordered: FA, OCT retina, A-scan and A-scan OD The patient was diagnosed with wet AMD and is currently undergoing intravitreal avastin

Case 2
83 year-old female presents with poor vision OD after cataract surgery. The surgery was preformed without any complications two months prior. She has a previous history of wet macular degeneration in both eyes with a large submacular hemorrhage in the right eye, which resolved after one intravitreal avastin injection. She has no history of any systemic diseases, no family history of blindness or malignancy. BCVA: OD: 3/200; OS: 1/200 Pupils: + APD OD IOP: OD: 16; OS: 16 External anterior segment exam: unremarkable OU Fundus: OD: C/D 0.5, new submacular hemorrhage. OS: C/D 0.5, large disciform scar. Treatment: Three intravitreal avastin injections were administered, but the hemorrhage OD did not resolve. Tests ordered: FA, OCT, B Scan OD. After malignancy was ruled out, the patient was diagnosed with wet AMD, and underwent a pars plana vitrectomy.

Differential Diagnosis
1. wet macular degeneration
2. Choroidal melanoma
3. Metastasis
4. Peripheral exudative hemorrhagic chorioretinopathy
5. Combined hamartoma of the retina and RPE
6. Congenital hypertrophy of the retina and RPE

Conclusions & Implications
Macular degeneration accounts for 80% of legal blindness in the United States, with 1 in 10 Americans presenting with advanced AMD in at least one eye. The disease is progressive and results in the loss of central vision, similar to the patients in these cases. When choroidal neovascularization is present, new vessels violate Bruch’s membrane and invade the RPE and retina, which ultimately can produce the appearance of a mass effect. 2/3 of wet AMD cases are subsequently misdiagnosed as choroidal melanoma. The appropriate diagnostic testing with A-scan, B-scan, FA, and OCT retina along with a thorough history and clinical exam findings help guide the diagnosis towards wet macular degeneration.

References

Contact Information
Shauna Berry, DO; seberry821@gmail.com