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Macular and Optic Disc Drusenoid Deposits with Hemifield Defects in a patient with IgA Nephropathy: New Findings

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Macular and Optic Disc Drusenoid Deposits with Hemifield Defects in a patient with IgA Nephropathy: New Findings

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CLINICAL HISTORY:

A previously treated 20-year old female patient for skin rashes, hematuria and pain abdomen 8 months ago, consequently reported with indistinct vision predominantly more in the right eye than the left eye for the last one week.

Previous documents revealed features of leukocytoclastic vasculitis on skin biopsy and glomerular mesangial cell hyperplasia on renal biopsy that suggested a clinical diagnosis of IgA nephropathy.

One month after administration of prednisolone 50 mg/day that was tapered over a period of 8 months, proteinuria manifested

EXAMINATION AND INVESTIGATIONS:

General Physical and Systemic Examination: Normal.

Ophthalmic Examination:

- Visual acuity recording demonstrated 6/9 and 6/6 in the right and left eye respectively.
- Normal color vision testing.
- The anterior segment examination was unremarkable. Direct ophthalmoscopy
- bilateral optic disc hyperemia with indistinct margins,
- retinal venular engorgement and absent spontaneous venous pulsations with irregular and widened normal macular reflex more prominently demonstrated in the right eye.

Figure 1 Right eye Fundus camera picture showing distorted normal macular ring reflex with irregular reflection at the superior macular area

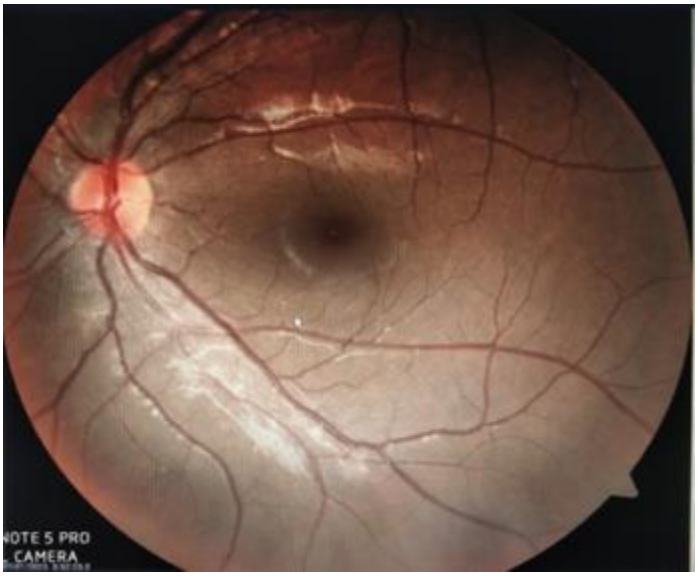

Figure 2 Left eye Fundus camera picture showing less prominent findings

Optical coherence tomography (OCT) of the optic disc at the temporal and nasal aspects showed hyperechoic intense reflections that probably suggested drusenoid like deposits predominantly in the right eye.

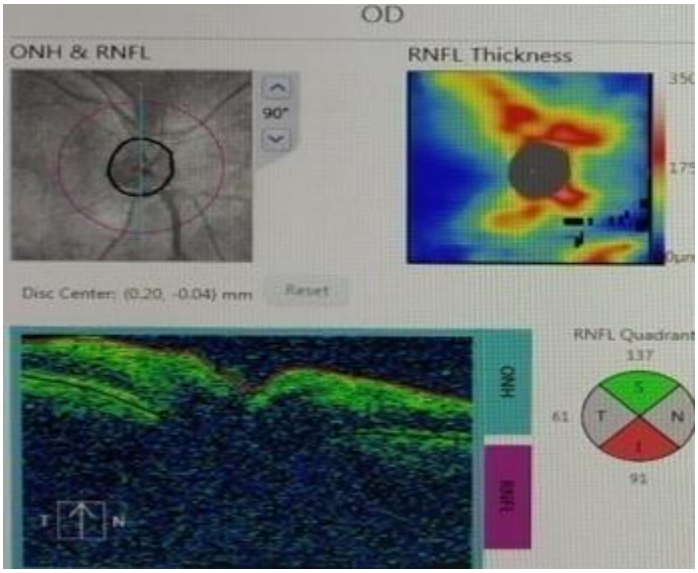

Figure 3 showing drusenoid deposits in the right eye at the temporal and nasal aspect of the optic disc

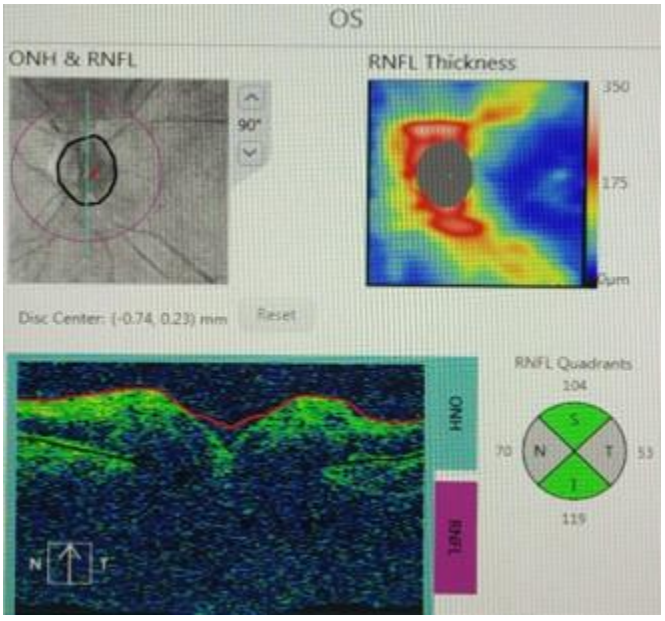

Figure 4 showing less prominent drusenoid appearance in left eye optic disc

OCT of macula showed a similar echoic configuration in the outer retinal layers and Bruch's membrane that probably suggested drusenoid like deposits with a parafoveal thickening. (Fig 5 & 6)

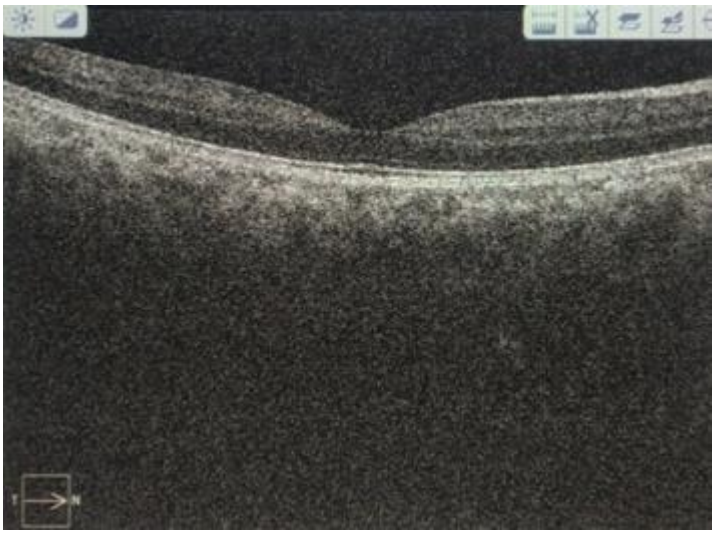

Figure 5 Right eye OCT macula showing drusenoid deposits in the outer retinal layers and Bruch's membrane

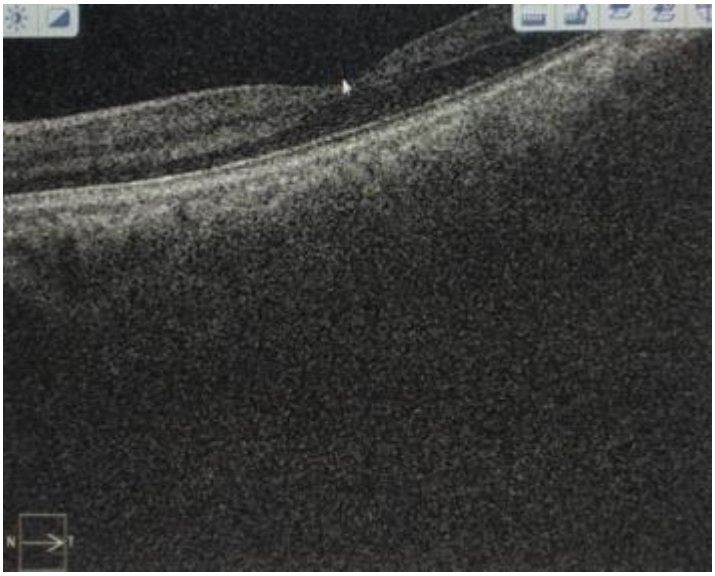

Figure 6 Left eye OCT macula showing less prominent drusenoid deposits

Humphrey field analyzer (HFA) showed inferior hemifield defects more prominently observed in her right eye than the left eye. (Fig 7 & 8)

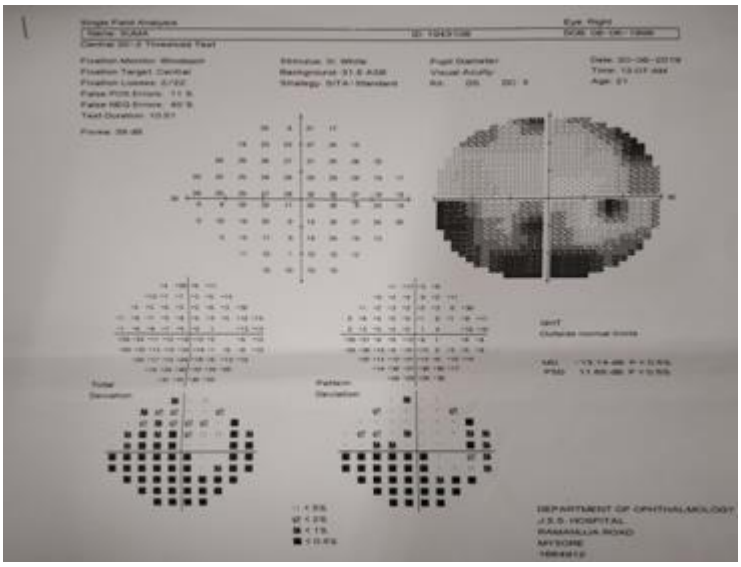

Figure 7 showing prominent right inferior visual field defects with blind spot enlargement in HFA

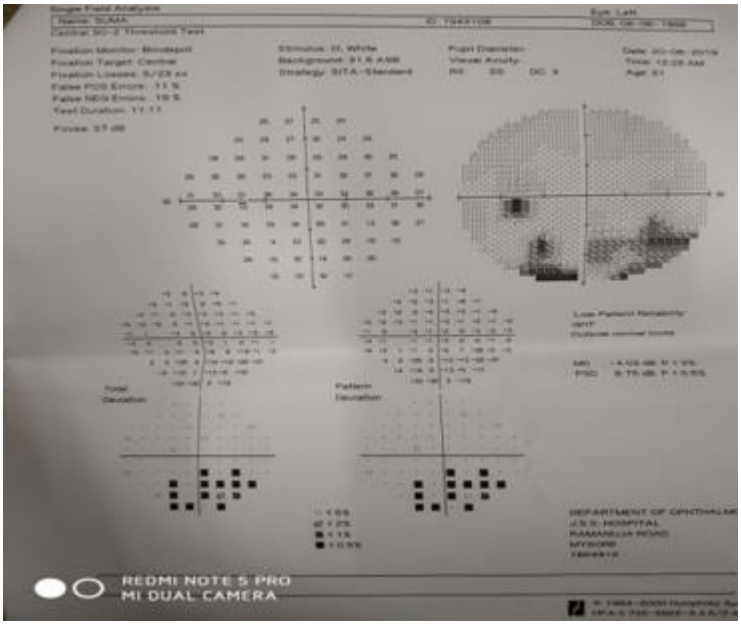

Figure 8 showing less prominent inferior visual field defect with blind-spot enlargement on HFA

Hb 10.8 gm/dL

TLC: 11720 cells/cu mm,

ESR 60 mm/hour by Wintrobe method.

Peripheral smear: Normocytic normochromic anemia.

Urine analysis: Albuminuria, RBC and pus cells.

Stool occult blood: Positive.

RBS, RFT, LFT, serum electrolytes and coagulation profiles were normal.

C3 and C4 levels: Normal.

ANA, cANCA, and pANCA: Negative.

USG abdomen and pelvis: Fatty liver and few mesenteric lymph nodes.

FINAL DIAGNOSIS:

IgA nephropathy

Treatment Given:

Patient was treated previously with a systemic oral dose of prednisolone 50 mg/day and now is on a maintenance dose of 15mg/day

DISCUSSION:

IgA nephropathy involves an error in IgA1 glycosylation resulting in IgA1 secretion into the systemic circulation. The IgA1 forms complex deposits attached to the extracellular matrix and mesangial cells within the glomerulus. This induces mesangial cells to release pro-

inflammatory mediators and activate the complement system via lectin and alternative pathways. [1]

This young female patient previously diagnosed as IgA nephropathy presented with disturbed vision more conspicuously in the right eye similar to the previous reports. [3] Direct ophthalmoscope findings correlated with fundus camera photography in addition to OCT images. Paramacular hyper reflective echoes observed at the macula was probably due to drusenoid deposits similar to the previous case report. OCT of optic disc showed similar image characteristic features that were correlated as inferior field defects on HFA, probably is the cause for diminished vision in our patient.

Ocular involvement is very rare in patients with IgA nephropathy. Nevertheless, a previous study reported the presence of cotton wool spots, serous retinal detachment, and choroidal infarcts on FFA [4] In the present literature, only one case of a 42-year-old patient with IgA nephropathy who had small, clustered and well-defined macular deposits reported. [3] Rueda-Rueda T et al reported an association of unilateral uveitis in IgA nephropathy. [5] In conclusion, we demonstrated new findings of optic disc drusenoid deposits with inferior visual field defects in addition to paramacular drusenoid-like deposits in a patient with IgA nephropathy.

ACKNOWLEDGEMENTS: None

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