

# AN UNUSUAL OCCURRENCE OF STROMAL KERATITIS IN DENGUE FEVER, SUPPORTED BY HISTOPATHOLOGY.

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## INTRODUCTION

Ophthalmic complications associated with dengue fever (DF) and dengue hemorrhagic fever (DHF) are mostly posterior segment manifestations such as macular edema, vascular occlusions, vasculitis with related retinal hemorrhages, choroidal effusion, or exudative retinal detachment. Anterior segment manifestation has mostly been reported in the form of subconjunctival hemorrhage and anterior uveitis. Herein, we describe an unusual occurrence of simultaneous bilateral blindness in a case with history of DF. We also report a rare corneal complication of DF that has not been previously described in literature.

## CASE REPORT

A 25-year-old girl presented to our outpatient department with sudden and severe loss of vision in both the eyes since 3 days. She was admitted in the medicine department 15 days before and was diagnosed of dengue fever (DF) as she was found positive for IgM, IgG, and dengue nonstructural protein 1 (NS-1) antigen.

On ophthalmic evaluation, the vision in her both eyes was no perception of light. Right eye (RE) revealed total yellowish white opaque cornea mimicking corneal abscess, thinned out inferiorly near the limbus. Left eye showed ciliary flush, mild corneal edema, medium to large sized keratic precipitates, and 360° posterior synechiae with complicated cataract precluding fundus view. Penetrating keratoplasty was planned in RE to preserve corneal integrity and for the removal of inflamed corneal tissue. Intraoperative findings revealed edematous opaque cornea [Fig.1a], inflammatory pupillary membrane [Fig.1b], and complicated cataract [Fig.1c]. Corneal graft was sutured with twelve interrupted bites using 10-0 nylon [Fig.1d]. The specimen was sent for histopathology and microbiological examination. Preoperative B-scan ultrasonography of both eyes showed vitreous hemorrhage, total retinal detachment, and choroidal effusions [Fig.2c] and [Fig.2b]. The patient was started on medical therapy for raised IOP along with topical corticosteroids and lubricants in both the eyes. Histopathological examination revealed stromal breakdown with myxoid change, neovascularization, mixed inflammatory infiltrate comprising neutrophils and lymphocytes [Fig.3]. Microbiological examination was unremarkable. The vision remained no perception of light in both the eyes after about 6 months of follow-up [Fig.2c] and [Fig.2d].

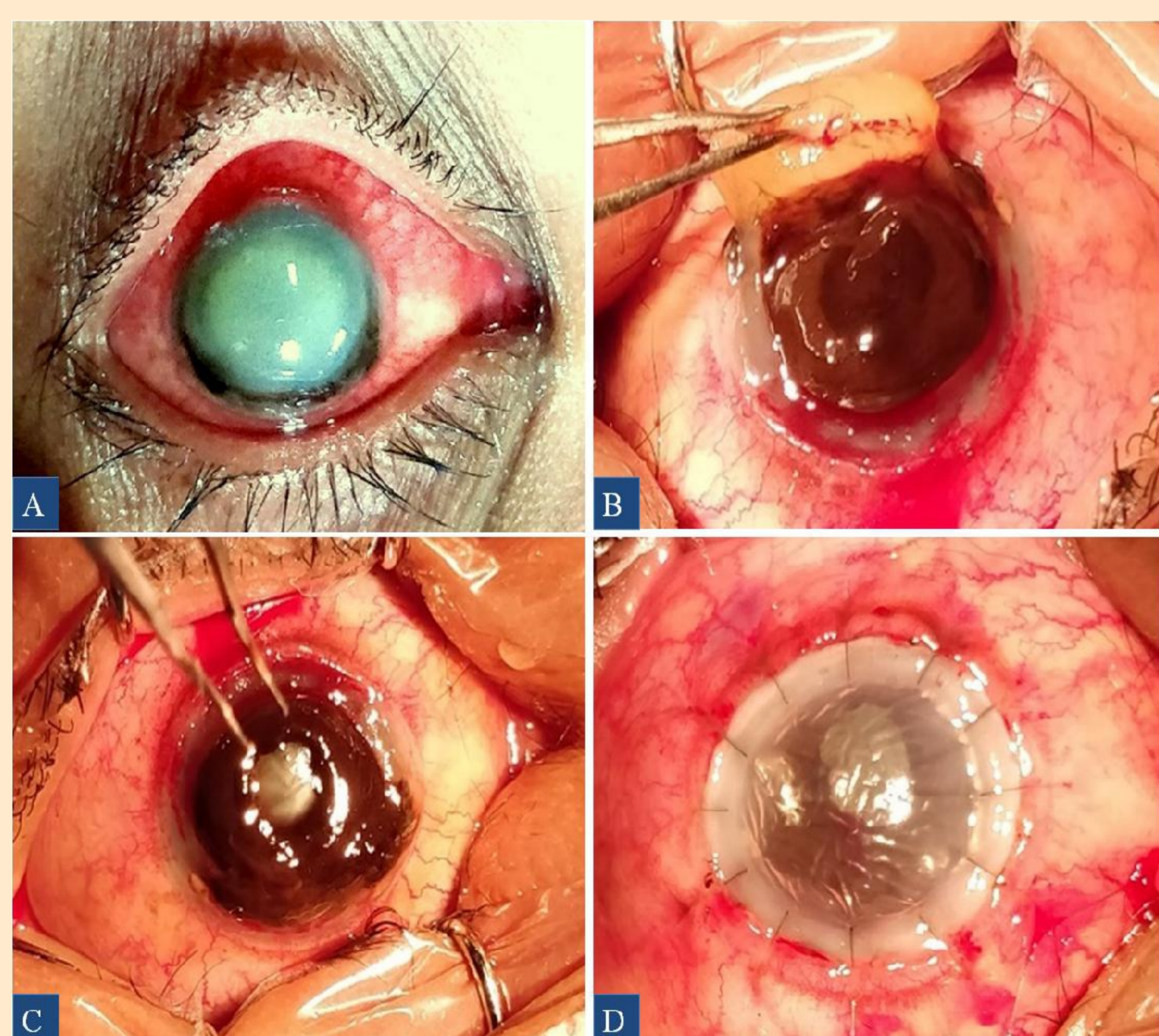


FIG.1

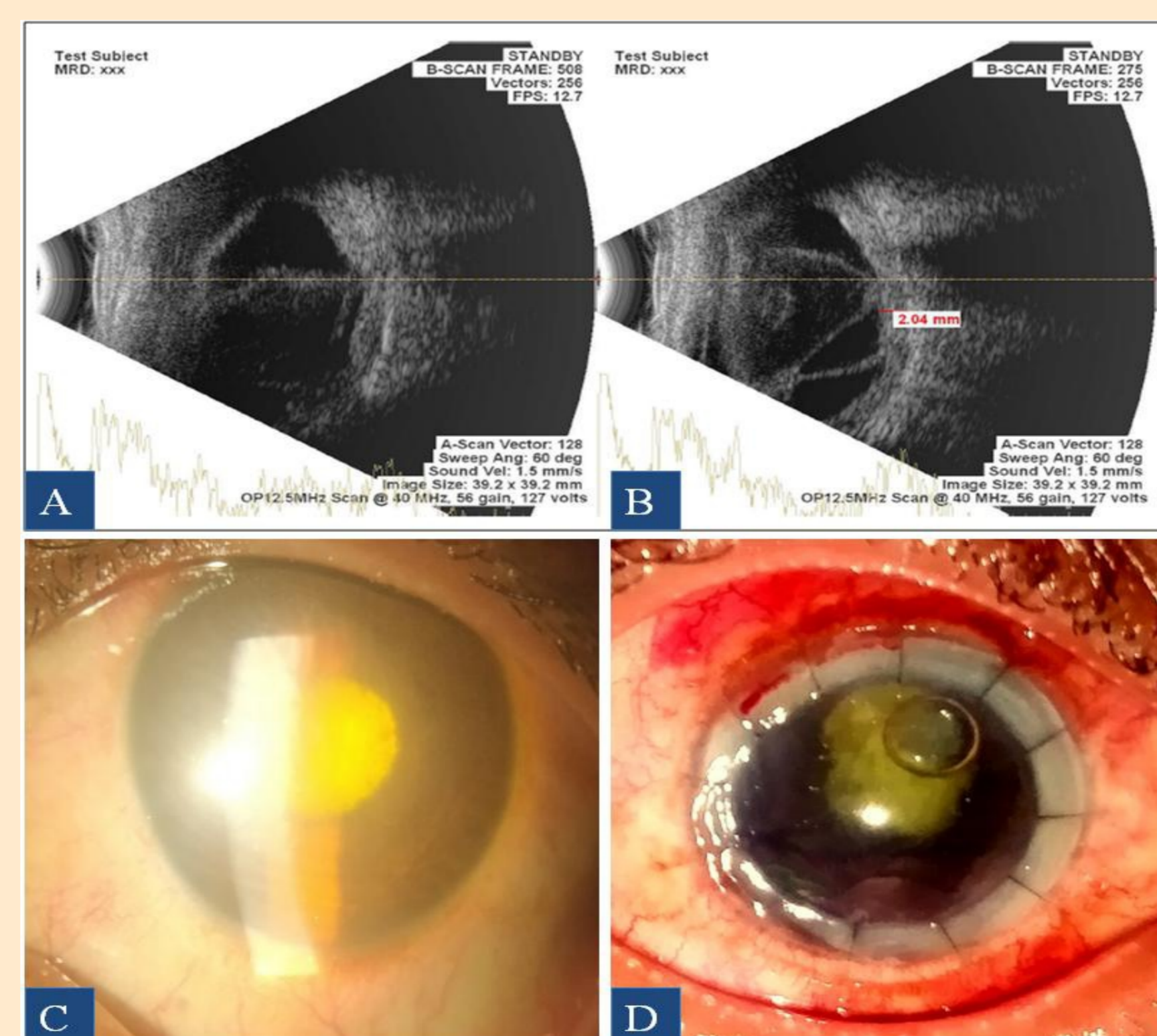


FIG.2

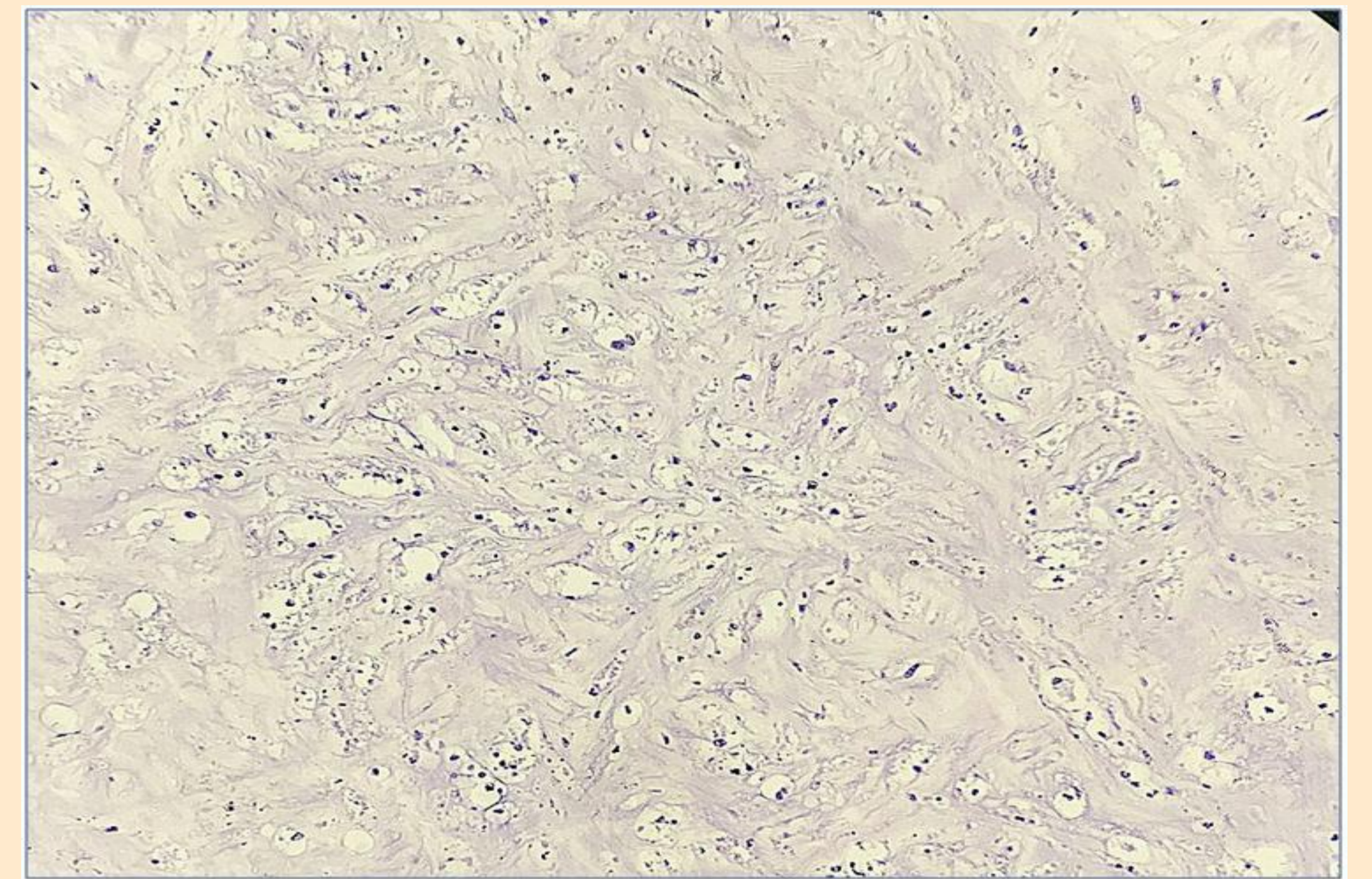


FIG.3

## DISCUSSION

Ocular findings in our patients primarily included anterior uveitis, vitreous hemorrhage, exudative retinal detachment, and choroidal effusion, which could be due to generalized increased capillary leakage, breakdown of the blood-aqueous barrier and hemorrhagic diathesis associated with platelet destruction, and consumptive coagulopathy.[5] The possible mechanism of corneal complication in our case is believed to be a result of complex immune-mediated process which might have caused autoantibody formation against corneal endothelial cells. The onset of ophthalmic complications in our patient does not relate with low platelet count. Thus, a complex immune-mediated pathogenesis has been suggested for these manifestations.

## CONCLUSION

In conclusion, current case provides an insight to primary care physicians, general ophthalmologists, and other eye care professionals of all the possible ophthalmic complications in patients with severe dengue so that early diagnosis and referral for appropriate supportive therapy can considerably reduce mortality related to this potentially fatal disease.

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