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Ocular Manifestations of Dengue Haemorrhagic Fever in a Tertiary Health Care Centre- A Case Study

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ABSTRACT: Dengue virus belongs to Flavivirus genus of the family, Flaviviridae and transmitted by the bite of Aedes aegypti . A prospective observational study was conducted in 68 patients, both male and female admitted in the Dengue ward of hospital. The main manifestations includes subconjuctival haemorrhages, retinal and macular haemorrhage. All patients were evaluated systemically, ophthalmic examination was done along with laboratory investigations. **Conclusion:** The ocular manifestations were attributed to thrombocytopenia with coagulation defects, capillary defect and platelet dysfunction.. The onset of these manifestations correlated with the decreasing platelet count.

I. INTRODUCTION:

Dengue virus belongs to Flavivirus genus of the family, **Flaviviridae** and there are four antigenically related serotypes of dengue virus (DENV 1-4).It is transmitted to humans by bite of infected female **Aedes aegypti** and **Aedes albopictus**.40% of world's population i.e about 3 billion people ,live in areas with a risk of dengue infection.Each year upto 400 million people get infected with dengue.

Approximately 100 million people get sick from infection and 22,000 die due from severe dengue. Dengue is one of the biggest health issue in India. More than 67,000 people in India have been already diagnosed with dengue as per reports by the National Vector Borne Disease Control Programme (NVBDCP) .

NVBDCP data reveal that over one lakh people were diagnosed and an estimated 172 died from dengue in 2018. According to State health department data, Odisha is the 7th most dengue affected state in India. Ophthalmic manifestations are also reported to be associated with dengue fever and they range from subconjuctival haemorrhage to optic neuritis.

The main manifestations includes subconjuctival haemorrhages, retinal and macular haemorrhages.Less common features include anterior uveitis, exudative retinal detachment, retinal vein occlusion and vitreous haemorrhage. The main objective of my study was to evaluate the ocular manifestations associated with dengue fever.

II. MATERIALS AND METHODS:

A prospective observational study was conducted in 68 patients, both male and female admitted in the Dengue ward of hospital during June 2018 to May 2019.Systemic evaluation , ophthalmological examination and laboratory investigations was done in all patients.The diagnosis was done with symptoms of fever along with associated symptoms, serological investigations of IgM and IgG Rapid test and estimation of platelet count . All patient's best corrected visual acuities were measured with Snellen acuity chart. A dilated fundus examination was done with slit lamp using 78D lens to visualise posterior fundus and Indirect Ophthalmoscopy with 20 D to see fundus periphery. Upon clinical diagnosis patients underwent further visual field testing using automated visual field analyzer and macular assessment using OCT.

Out of 68 patients of dengue, 45 patients were having positive ophthalmic manifestations and were followed up weekly.

III.RESULTS:

Out of 68 cases admitted,41 were male(60.2%) and 27 were female(39.8%).The mean age group of presentation was 25 years (15-65).Ocular manifestations was more in patients with thrombocytopenia less than 35,000 µl and maximum between 15,000µl to 35,000µl.

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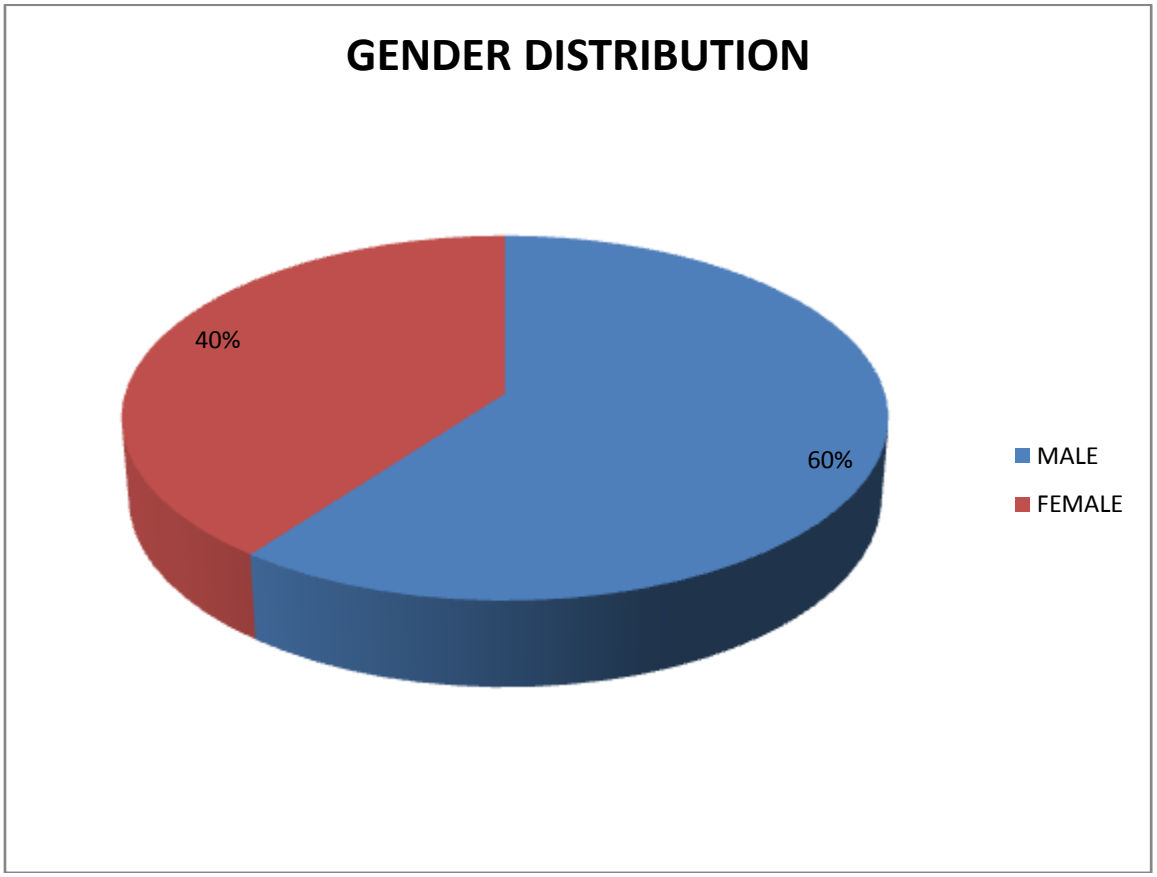

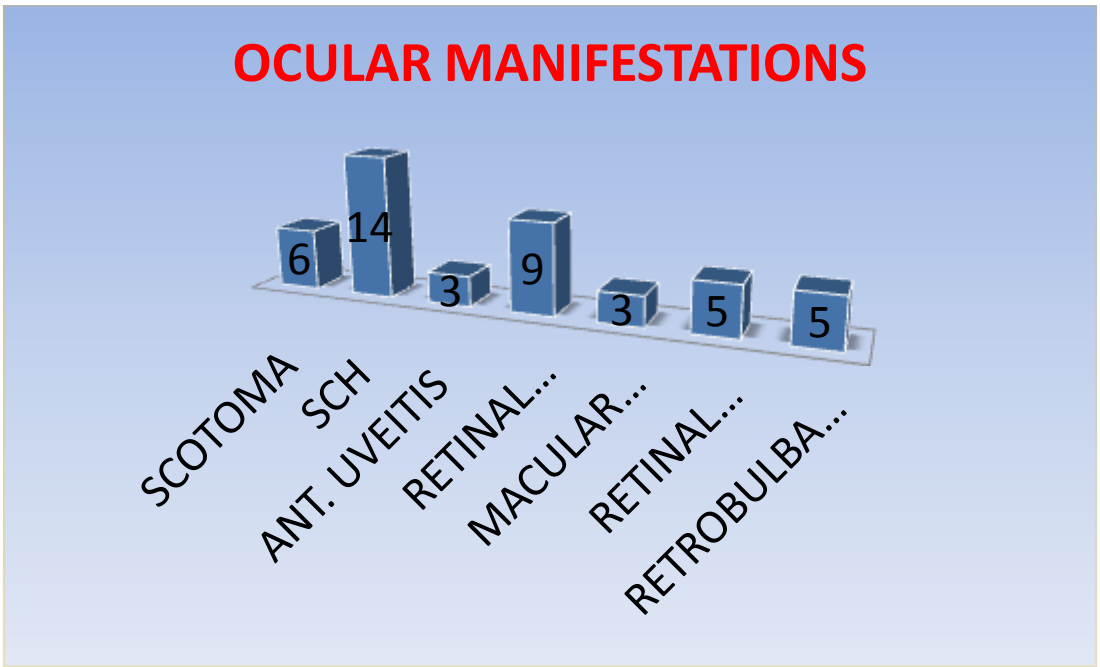

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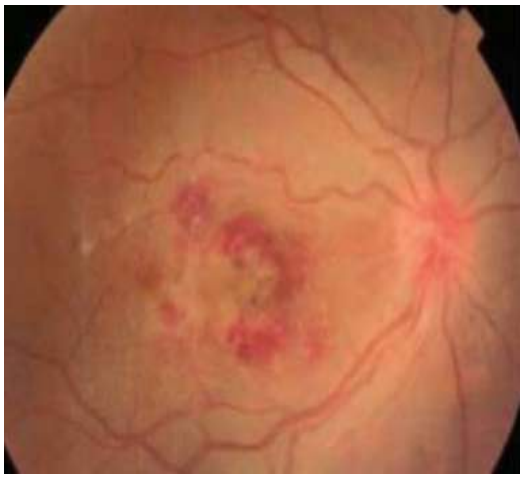
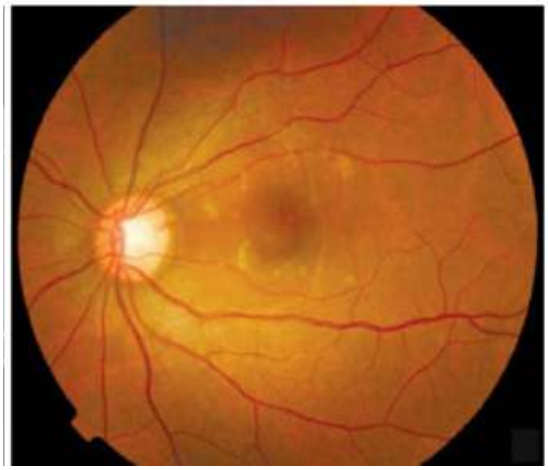
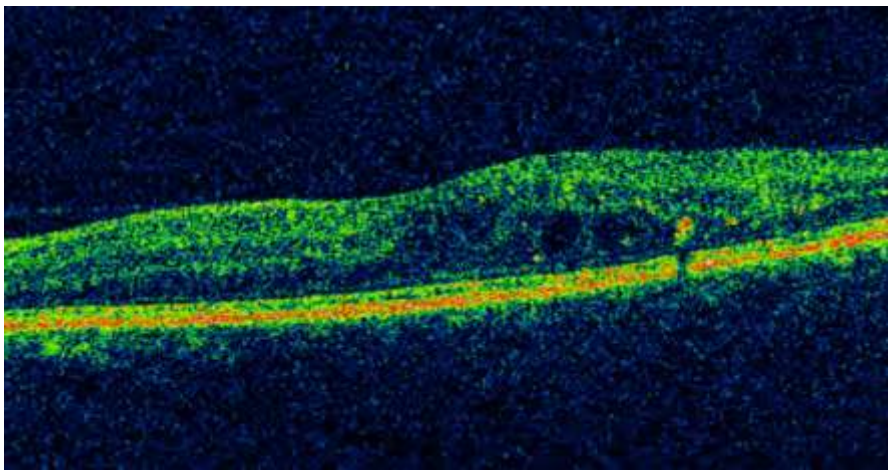
ANTERIOR SEGMENT FINDINGS;


POSTERIOR SEGMENT FINDINGS



IV. DISCUSSION:

- Dengue is one of the most important viral disease affecting humans.
- The ocular manifestations were attributed to thrombocytopenia with coagulation defects, capillary defect and platelet dysfunction.
- The onset of these manifestations correlated with the decreasing platelet count.
- Recovery from the infection provides lifelong immunity.