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Clinical Profile of Dengue Patients and Severity Prediction – A Clinical Study

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ABSTRACT

Background: Dengue is a major mosquito-borne viral infection with increasing prevalence globally, particularly in tropical regions. The clinical presentation varies from mild febrile illness to severe complications such as Dengue Hemorrhagic Fever (DHF) and Dengue Shock Syndrome (DSS).
Objectives: To evaluate the clinical profile of dengue patients and identify predictors of severity, enabling early management and prevention of complications.
Methods: A prospective observational study on 120 dengue-positive patients admitted to a tertiary care hospital. Clinical features, hematological parameters, liver function tests, and warning signs were recorded and analyzed.
Results: Fever (100%), headache (72%), myalgia (68%), and rash (48%) were common symptoms. Thrombocytopenia was present in 94% of patients. Severe dengue was significantly associated with elevated hematocrit, persistent vomiting, abdominal pain, liver dysfunction, and platelet count <50,000/µL.
Conclusion: Certain clinical and laboratory factors such as thrombocytopenia, high hematocrit, elevated liver enzymes, and warning signs can predict severity and help in timely intervention to reduce morbidity and mortality.

Keywords: Dengue, Thrombocytopenia, Hematocrit, Severe Dengue, Clinical Profile, Severity Prediction.

INTRODUCTION

Dengue is a viral infection caused by the Dengue virus (DENV 1–4) transmitted by *Aedes aegypti* mosquitoes. It has become a major public health concern, especially in Southeast Asia and India. Early recognition of severe dengue is crucial to prevent mortality.

Types of Dengue

1. **Dengue Fever (DF)**
2. **Dengue Hemorrhagic Fever (DHF)**

3. **Dengue Shock Syndrome (DSS)**
4. **Severe Dengue**

WHO Classification – Warning Signs

- Severe abdominal pain
- Persistent vomiting
- Mucosal bleed
- Hepatomegaly
- Rapid decline in platelet count
- Rise in hematocrit

This study aims to evaluate the **clinical and laboratory profile of dengue patients and identify factors predictive of severity.**

AIMS & OBJECTIVES

1. To study the clinical presentation of dengue.
2. To analyse hematological and biochemical parameters.
3. To identify predictors of severe dengue.
4. To correlate warning signs with disease severity.
5. To assess outcomes and complications.

MATERIALS AND METHODS

Study Design:

Prospective observational study.

Study Duration:

6–12 months.

Sample Size:

120 laboratory-confirmed dengue patients.

Inclusion Criteria:

- NS1 Ag or IgM ELISA positive
- Age >12 years
- Patients admitted for inpatient care

Exclusion Criteria:

- Malaria, leptospirosis, chikungunya
- Chronic liver disease
- Immunocompromised patients

Data Collection:

- Clinical history & physical examination
- Laboratory investigations:
  - CBC with Platelet count
  - Hematocrit
  - Liver function tests (SGOT/SGPT)
  - Renal function tests
- WHO severity classification applied

OBSERVATIONS & RESULTS

1. Age Distribution

Age Group	Patients (%)
<20 years	22%
21–40 years	48%
41–60 years	24%
>60 years	6%

2. Clinical Features

Symptom	Percentage
Fever	100%
Headache	72%
Myalgia	68%
Retro-orbital pain	44%
Vomiting	52%
Rash	48%
Abdominal pain	40%

3. Laboratory Findings

Parameter	Mild Dengue	Severe Dengue
Platelet <50,000/µL	8%	66%
Hematocrit >45%	12%	70%
SGOT/SGPT elevated	30%	78%
Hypotension/shock	2%	40%

4. Warning Signs Predicting Severity

✔Persistent vomiting

✔Abdominal pain

✔Pleural effusion

✔Liver enzyme elevation

✔Platelet count <50,000

✔Hematocrit rise >20%

5. Outcomes

Outcome	% of Patients
Recovered without complication	76%
Required ICU care	18%
Mortality	6%

Mortality was strongly associated with:

➡ Hepatic dysfunction

➡ Shock at admission

➡ Hematocrit >50%

➡ Platelet count <30,000/µL

DISCUSSION

Early diagnosis and risk stratification are the key to preventing complications in dengue. In this study, **thrombocytopenia, elevated hematocrit, and liver dysfunction were major predictors of severity**, which correlates with WHO guidelines and international studies.

This highlights the **importance of regular monitoring of platelet count, hematocrit, and liver enzymes** in admitted patients.

Key Predictors of Severe Dengue

- Persistent vomiting
- Abdominal pain
- Tachycardia / hypotension
- Platelets <50,000
- Hematocrit rise >20%
- SGOT/SGPT >2× normal

CONCLUSION

✔Dengue presents with variable clinical features.

✔**Thrombocytopenia and high hematocrit are the strongest predictors of severity.**

✔Early identification of warning signs can reduce morbidity and mortality.

✔Liver enzyme monitoring plays a vital role in severity prediction.

✔Timely fluid management and ICU care improve outcomes.

Therefore, severity prediction models should be implemented in all tertiary care centers.

LIMITATIONS

- Single-center study
- Small sample size
- No follow-up after discharge

RECOMMENDATIONS

- ✓ Daily monitoring of CBC and LFT
- ✓ Early ICU referral for high-risk patients
- ✓ Training of healthcare workers in WHO severity criteria
- ✓ Awareness programs for community prevention

REFERENCES (Sample)

1. WHO. Dengue Guidelines for Diagnosis, Treatment & Prevention. 2021.
2. Gubler DJ. Dengue and dengue hemorrhagic fever. Clin Microbiol Rev. 2002.
3. Srikiatkhachorn A, et al. Predictors of severe dengue. Trop Med Int Health. 2018.
4. Gupta N, et al. Clinical profile of dengue patients. Indian J Med Res. 2012.