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DENGUE TRENDS- A FIVE YEAR STUDY IN A TERTIARY CARE HOSPITAL IN MUMBAI

General Medicine

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ABSTRACT

Acute febrile illnesses are the most commonly vector borne diseases specially in the tropics. Malaria was the commonest till recent times. Recent years have shown increased Dengue cases, to the extent that it has overtaken Malaria. It now ranks as the most common vector borne viral infection in India. Large scale outbreaks , both urban and now rural, are becoming a commonality. Mumbai being a commercial hub, sees a lot of mixed populations, migration and ongoing construction. All this, along with conducive environmental and climatic changes, creates an environment for increased Dengue mosquito breeding sites and infection. This has created an alarming situation in the last few years, resulting in loss of work days and panic. Our study was undertaken with a view to analyse the trends of clinical and laboratory profile of Dengue during the last five years. The aim is to systematically understand the trends from 2013 to 2018, to effectively manage and reduce Dengue morbidity and mortality, in continuation of our earlier work.

KEYWORDS

Febrile illness, Dengue, Monsoon related infections

INTRODUCTION-

Acute febrile illnesses still form the major chunk of illnesses in tropical countries. Among them vector borne infections are commonest. Malaria was the leading cause till the recent past. Trends in tropics, including India are changing during recent years. Dengue is emerging as the most common vector borne Monsoon related febrile illness. It has overtaken Malaria as the major cause of acute febrile illness. In Mumbai there is particularly extensive and indiscriminate ongoing construction work and huge migrant population. This creates an ideal hub for Dengue breeding sites. The trend of rising Dengue cases has been persistent. An in depth observation of these trends will lead to better analysis of ways to pave the way for increased awareness. This in turn will pave the way for better preparedness and reduced morbidity , mortality and Dengue control.

MATERIALS AND METHODS-

A retrospective observational study on Dengue cases admitted from 2013 to 2018 in a tertiary care hospital in Mumbai was carried out. All Indoor Dengue patient's case papers including ICU were evaluated. Comparison of clinical profile and laboratory criteria were analysed. Special investigations were carried out when indicated.

RESULTS-

Table-1 Laboratory Values Of Yearly Dengue Cases

Year	Dengue cases(No)	>RFT%	>LFT%	PLT<10000%
2013	67	4.47	73.13	10.44
2014	108	3.70	85.18	9.25
2015	149	2.68	69.12	9.39
2016	369	2.43	83.73	4.60
2017	239	3.34	88.28	6.27
2018	436	2.75	88.69	4.35

During the years 2013 to 2018 ,Dengue cases showed a fairly increasing trend. Transaminitis (raised AST/ALT) was almost universal .This group presented with severe epigastric distress, particularly from 2015 onwards. Severe thrombocytopenia (Platelets <10000microL) ranged from 4.35 to 10.44%.

ICU admissions requiring platelet transfusion and ARDS cases were compared and analysed.Mortality was then analyzed.

Table-2- Number Of Critical Dengue Patients In ICU And Mortality

Year	PLT Transfusion(%)	ARDS (%)	Mortality (%)
2013	8.95	1.49	2.98
2014	10.18	1.85	1.85
2015	6.71	0.67	0
2016	2.98	0.54	0.27
2017	5.02	0.41	0
2018	2.52	0.22	0.22

DISCUSSION-

Dengue cases have steadily risen during the last five years.[1,2] It is now emerging as the most important vector borne viral diseases in the tropics.[3] Both urban and rural spread has been observed, in Tropical countries, including India.[4] Sporadic fluctuations demand better environmental scrutiny and focussed entomological research.[5] Despite this mortality rates showed a decline. Improved clinical practices and preparedness, judicious use of diagnostic aids together with balanced use of platelet transfusion and timely management strategies have contributed to reduced mortality.[6] We also noted a shift in clinical profile, with the incidence of DSS and DHF reducing and atypical presentations like epigastric distress with almost universal hepatic transaminitis increasing. In continued studies, transaminitis has been a notable and universal trend. Controlled platelet transfusion and increased awareness resulting in regular monitoring and thus early ICU transfers have been contributory to reduced mortality.[6] Increased awareness of environmental health and public education resulting from dedicated research and knowledge dissemination has reduced morbidity and work loss days. Addressing these issues and awareness will reduce panic and encourage early detection and timely management. As vaccine and specific medication is still under research, awareness and early detection along with environmental control are a priority.

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