VOLUME - 9, ISSUE - 9, September - 2020 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper | General Medicine

A STUDY OF CLINICAL AND MICROBIOLOGICAL PROFILE OF ACUTE UNDIFFERENTIATED FEVER IN A TERTIARY CARE CENTRE IN SOUTH INDIA

Dr. K. Ashwin — Post Graduate, M.D. Medicine, Department of General Medicine, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.

Dr. B. Rameez Raja* — Assistant Professor, Department of General Medicine, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India. *Corresponding Author

Dr. R. Vedamanickam — Associate Professor, Department of General Medicine, Sree Balaji Medical College and Hospital, Chennai, Tamil Nadu, India.

KEYWORDS : Acute Undifferentiated Fever , Clinical Profile , Microbiological Profile

INTRODUCTION

India is a tropical country and is home to a variety of infectious diseases. Acute undifferentiated fever is associated with significant morbidity and mortality in developing countries caused by diverse microbial pathogens. The burden is compounded by restricted resources, low immunization rates and Challenging public health control measures. Acute undifferentiated fever accounts for the majority of out patient's visits and inpatient admission.

OBJECTIVES

To know the socio demographic details of the patients. To study the clinical and microbiological profile of the acute undifferentiated fever.

MATERIAL AND METHODS

Study Design: This a Hospital based Cross sectional study

Study Setting: This study was carried out in Department of General Medicine, Sree Balaji Medical College and Hospital, Chennai.

Study Duration: This study was conducted for the period of one year April 2018 to April 2019.

Study Subjects: All adult patients more than 18 years of age with fever lasting for less than 2 weeks with no evident focus of infection following initial clinical evaluation were included in the study. Exclusion criteria: Patients with chronic illness and refusal to give informed consent were excluded from the study.

Ethical Issues: The study protocol was approved by the Institutional Ethical review committee and written informed consent was obtained from the patient.

Data Collection: The detailed clinical history, physical examination findings and routine laboratory investigation results were recorded.

Statistical Analysis: EPI info software package was used to analyze the data. Descriptive analysis was done using percentages and frequency. For the test of significance chi square test was performed.

RESULTS

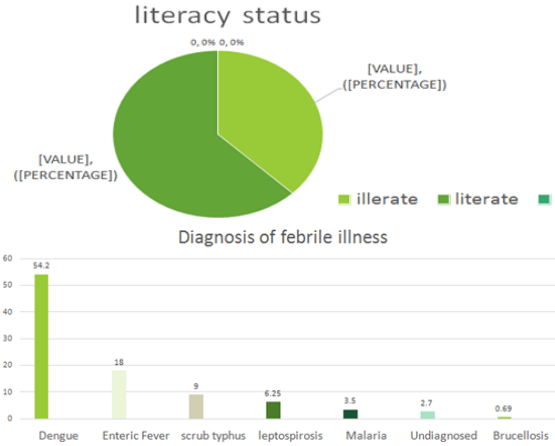
The following results were obtained at the end of the study:

Males were affected more commonly (63.7%) than females.

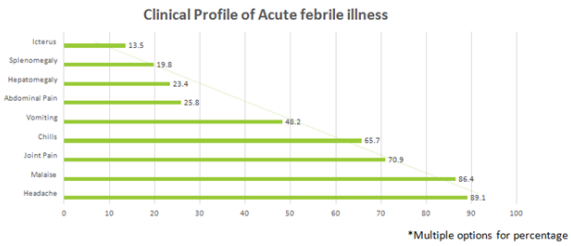
Table 1: Socio demographic details for 262 patients

Of the 296 patients, 34 patients were excluded as they either refused to give consent for blood sample collection for confirmation of the diagnosis (11) or were loss to follow-up (23).

Sex distribution	Male	Female
	167 (63.7)*	95 (36.2)
Age distribution	**Age < 60 years of age**	**Age > 60 years of age**
	203 (77.4)*	59 (22.51)
* P value is < 0.05		



Dengue (54.2%) remains the most common cause of fever in the population studied followed by enteric fever(18%), scrub typhus (9%) and leptospirosis (6.25%).



Most of the patients presented with non-specific symptoms like headache(89.2%),malaise(86.4%),joint pain(70.9%) followed by chills(65.7%) and vomitting(48.2%).

Hematological			
	Anemia	**Thrombocytopenia**	**Leucopenia**
Dengue	10.9	88.9*	29.6
Enteric fever	15.3	12.3	85.3
Scrub Typhus	60.9	27.5	36.38
Leptospirosis	64.1	55.5	43.3
Malaria	83.1	36.2	53.7

Biochemical					
	Albumin	**Bilirubin**	**ALT**	**AST**	**ALP**
Dengue	7.6	8.9	15.7	16.3	14.1
Enteric Fever	28.4	35.7	46.4	51.2	62.5
Scrub Typhus	29.7	31.9	35.2	31.7	39.4

Leptospirosis	79.6	92.6	90.3	87.1	97.4
Malaria	48.3	42.5	29.7	39.8	32.1

Most of the patients with dengue(88.9%) had thrombocytopenia and most of the patients with leptospirosis (92.6%) had elevated bilirubin value.

DISCUSSION

The causes of AFI are numerous and are region and country specific. AFI accounts for most of the preventable deaths in developing countries. AFI causes significant morbidity and mortality in developing countries. The majority of the patients in our study were males. The male preponderance(63.7%) may be due to more chance of exposure to vectors like mosquitoes and mites owing to their outdoor activities and also attributed to lower utilization of health care facilities by females due to socio-cultural reasons.

Most of the patients were in the middle age group (20 – 45 years), in economically productive period during which they have a greater risk of having contact with contaminated environment.

Our study revealed that there is a heavy burden of dengue fever, followed by scrub typhus, leptospirosis, chikungunya, enteric fever, malaria cases in South Indian region. The previous regional studies had reported etiologies among patients with AFI, with some variations and distribution based on the sampled population or the pathogen diagnostic panel facilities.

In our study, the majority of the patients presented with non-specific symptoms, such as headache, malaise, joint pain, chills. The symptoms and differential diagnoses of AFI are similar, often mimicking and making accurate clinical diagnosis is very difficult without laboratory confirmation.

CONCLUSION

The range of etiological agents and with common clinical manifestation and inadequate laboratory facilities in rural areas poses a challenge to physicians to manage the acute undifferentiated fever. Hence this study helps us to scrutinize the primary health care officials to take adequate measures to prevention and control measures in developing countries like India.

REFERENCES

1. Suttinont C, Losuwanaluk K, Niwatayakul K, Hoontrakul S, Intaranongpai W, Silpasakorn S, et al.Causes of acute, undifferentiated, febrile illness in rural Thailand: Results of a prospective observational study. Ann Trop Med Parasitol 2006;100:363-70.
2. Manock SR, Jacobsen KH, de Bravo NB, Russell KL, Negrete M, Olson JG, et al.Etiology of acute undifferentiated febrile illness in the Amazon basin of Ecuador. Am J Trop Med Hyg 2009;81:146-51.
3. Malavige GN, Fernando S, Fernando DJ, Seneviratne SL (2004) Dengue viral infections. Postgrad Med J80: 588–601.
4. Jena B, Prasad MNV, Murthy S. Demand pattern of medical emergency services for infectious diseases in Andhra Pradesh – A geo-spatial temporal analysis of fever cases. Indian Emergency Journal. 2010;1(5):821.
5. Pappachan MJ, Sheela M, Aravindan KP. Relation of rainfall pattern and epidemic leptospirosis in the Indian state of Kerala. J Epidemiol Community Health 2004;58:1054
6. Prakash GM, Anikethana GV. Clinical, biochemical and hematological pointers toward dengue infection in patients with acute undifferentiated fever. Int J Sci Stud 2016;4:111-3.
7. Thangarasu S, Natarajan P, Rajavelu P, Rajagopalan P, Seelinger Devey JS. A protocol for the emergency department management of acute undifferentiated febrile illness in India. International Journal of Emergency Medicine. 2011;4:57.
8. MA Andrews, Aleena Elizabeth, PraveenlalKuttichira. Clinical profile of acute undifferentiated febrile illness in patients admitted to a teaching hospital in Kerala. Health Sciences 2014;1:JS001D.
9. Garima Mittal, Sohaib Ahmad, R K Agarwal, Minakshi Dhar, Manish Mittal, and Shiwani Sharma. Aetiologies of Acute Undifferentiated Febrile illness in Adult Patients – an Experience from a Tertiary Care Hospital in Northern India. J ClinDiagn Res. 2015;9: 22–24.
10. Tadesse H and K. The etiology of febrile illnesses among febrile patients attending Felegeselam Health Center, Northwest Ethiopia. Amer J of Biomed Life Sci 2013; 1(3): 58-63.
11. Matthew R K , Patrick J B, Sok T, Buth S, Yasuda C Y , Maya Williams et al. Infectious Etiologies of Acute Febrile Illness among Patients Seeking Health Care in South-Central Cambodia. Am J Trop Med Hyg 2012; 86(2): 246–253
12. Andrews M A, Aleena E, Praveenlal K . Clinical profile of acute undifferentiated febrile illness in patients admitted to a teaching hospital in Kerala. Health Science2014;1(3):1