

# Study of Clinical Profile of Acute Undifferentiated Fever in a Tertiary Care Hospital

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## ABSTRACT

**Introduction:** Major aetiology of acute undifferentiated fever shows wide variation, especially in developing countries including India. Acute undifferentiated fever poses a diagnostic and therapeutic challenges to health care workers, particularly in limited resources. It is one of the commonest presenting problem in hospital. It is necessary to know the cause, which will be useful to give proper treatment to the patients. This study was aimed to find out the acute undifferentiated fever aetiologies and clinical pattern.

**Material and Methods:** This study was conducted on hundred patients of acute undifferentiated fever, admitted in Indira Gandhi institute of Medical Science, Patna from February 2018 to January 2019.

**Result:** Acute undifferentiated fever affected all age group but most common in 26 to 35 years of age group (29%). One hundred patients were included, 78male and 22female. In this study, Typhoid (41%) was leading cause of acute undifferentiated fever followed by Malaria (23%), Dengue Fever (20%), Leptospirosis (5%), Scrub Typhus (3%) and Chikungunya (1%). Common symptom was fever (100%), Headache (64%), Vomiting (48%), Rigor and chills (42%) whereas common sign was hepatosplenomegaly (55%). Typhoid fever (41%) was the commonest cause of acute undifferentiated fever followed by malaria (23%), dengue fever (20%), urinary tract infection (5%), scrub typhus (3%) and chikungunya (1%).

**Conclusion:** It is important to know the aetiology and clinical pattern of acute undifferentiated fever for their proper management and it will help to prevent morbidity and mortality.

**Keyword:** Acute Undifferentiated Fever, Aetiologies, Typhoid Fever, Malaria, Dengue Fever

fever includes potentially significant illness such as malaria, dengue fever enteric fever, leptospirosis, rickettsiosis, hantavirus and Japanese encephalitis.<sup>4</sup>

Acute undifferentiated fever accounts for the majority of out patients visits and inpatient admission in India. The causes for the same are variable and need a systemic approach to identify the cause of appropriate therapy.<sup>5</sup> In resource limited setting, fever may be treated empirically or self-treated due to lack of access to diagnostic tests.<sup>6</sup>

The study was aimed to find out the aetiologies and the clinical pattern of Acute undifferentiated fever.

## MATERIAL AND METHODS

This prospective observational study was conducted at Indira Gandhi Institute of Medical Sciences, Patna in the dept. of general medicine and duration of study was from February 2018 to January 2019. All cases in the study of Acute undifferentiated fever was examined according to clinical plan and investigated according to need. The study protocol was approved by the ethical committee of the institute and consent was obtained from each patient.

A detailed history and result of all clinical examination and laboratory investigation were recorded for each patient and analysed.

### Inclusion criteria

Patient more than 18 years of age and who presented to us with Acute undifferentiated fever of less than 15 days duration were included in this study. Patient who will give the consent for study.

## INTRODUCTION

Acute undifferentiated fever is a common cause for which the patient seeks health care in India especially in June and September.<sup>1</sup> Fever has become a common presenting complaint in developing world. Precise information about major aetiologies of acute fever is important for affective management to reduce morbidity and mortality especially in developing countries including India.<sup>2</sup> The Acute undifferentiated fever is used to denote fever that do not extend beyond a fortnight and lack of localizable or organ specific clinical feature.<sup>3</sup>

In the western world, Acute undifferentiated fever is often due to self-limited viral condition. However, in the developing world the differential diagnosis of Acute undifferentiated

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### Exclusion criteria

Patient less than 18 years of age and who will not give consent for study. Fever with localised source of infection like abscess, soft tissue infection.

### RESULT

In present study a total of 100 patients with acute undifferentiated fever were evaluated out of these 78 (78%) were male and 22 (22%) were female (table-1). The age of patient with acute undifferentiated patient ranged from 15-80 years and commonest age group in of most acute undifferentiated cases was 26-45 years. Out of 100 patients, most common symptom was fever (100%), headache (64%), vomiting (48%), Rigor and chills (42%), Rash (30%), Abdominal Pain (26%), Diarrhoea and breathlessness (18%), cough (16%), joint pain (14%) and altered sensorium (9%) (table-2). Where as common sign was hepatomegaly (29%) and splenomegaly (26%). In this study typhoid fever was the most common cause of undifferentiated fever (41%)

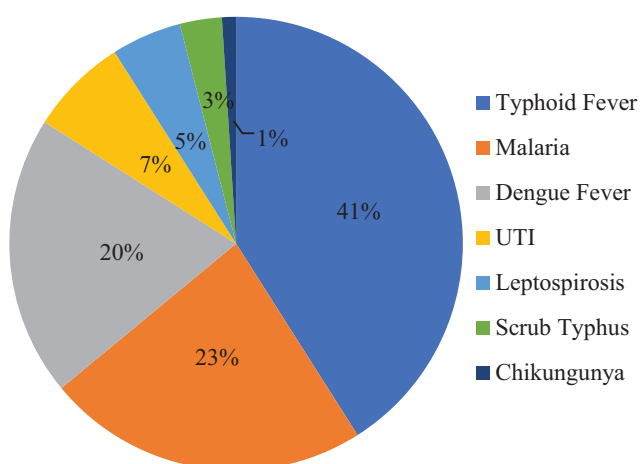


Figure-1: Etiology of Acute Undifferentiated Fever

Sex	No. of Patients	Percent (%)
Male	78	78%
Female	22	22%

Table-1: Sex distribution of Acute undifferentiated fever

Clinical Symptoms and sign	Number	Percentage (%)
Fever	100	100%
Headache	64	64%
Vomiting	48	48%
Rigor and chills	42	42%
Rash	30	30%
Abdominal pain	26	26%
Diarrhoea and breathlessness	18	18%
Cough	16	16%
Altered sensorium	09	09%
Hepatomegaly	29	29%
Splenomegaly	26	26%
Pallor	14	14%
Icterus	12	12%
Lymphadenopathy	06	06%
Eschar	01	01%

Table-2: Symptoms and Signs

followed by malaria (23%), dengue fever (20%), urinary tract infection (7%), leptospirosis (5%) and scrub typhus (3%) (figure-1). Haematological investigation was carried out in acute undifferentiated fever and it was observed that total leukocyte count <24 cells/ cumm in 28% and >11000 cells/cumm in 42% whereas platelet count <50000 cells/ml seen in 58% of the platelet count.

### DISCUSSION

Acute febrile illness with obscure aetiology also known as acute undifferentiated fever poses a burgeoning problem in clinical practice.<sup>7</sup> In the present study male population (78%) were more affected than female (22%). The most common age group affected in our study was between 26-35 years of age, reflecting young economically active people are affected more with these illnesses which were also supported by literature.<sup>8</sup> The predominance in males may be due to increased chances of exposure to mosquitoes and contaminated water due to their nature of work. Similar observation was made by other study conducted in northern india.<sup>9</sup> Out of the 100 patients, the most common symptoms were. vomiting 48% rigor and chills 42%, rashes 30%, abdominal pain 26%, breathlessness and diarrhoea 18%, cough 16%, joint pain 14% and altered sensorium 9%. where as common clinical sign were hepatomegaly 29% and splenomegaly 26% but a study done in Thailand reported common symptoms of acute undifferentiated fever as headache, myalgia and vomiting.<sup>10</sup> In present study typhoid fever (41%) was the commonest cause of acute undifferentiated fever followed by malaria (23%), dengue fever (20%), urinary tract infection (5%), scrub typhus (3%) and chikungunya (1%). A study conducted by Singh et al<sup>11</sup> from the region of Uttarakhand shows that dengue, malaria and Typhoid are the most common aetiological agent of acute febrile illness. In countries like Thailand, Malaysia and Nepal -dengue fever, malaria, scrub typhus, leptospirosis and enteric have been identified as main causes of acute undifferentiated fever.<sup>12</sup> Chrispal et al<sup>13</sup> had an observation in their study in south India on acute febrile illness where most patient had Dengue, Malaria, Leptospirosis and typhoid whereas study by Neelu sree et al<sup>14</sup> had reported Dengue, Malaria, Scrub typhus and leptospirosis in their study.

### CONCLUSION

It is important to know the various aetiologies responsible for acute undifferentiated fever. Understanding of aetiology, their local prevalence and their specific feature will help in treating acute undifferentiated fever cases during outbreak. Acute febrile illness can lead to fatal conditions if misdiagnosed or mistreated.

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