



PYREXIA PATIENTS FROM SUB-URBAN REGION, AN ANALYSIS, DIAGNOSIS, MANAGEMENT IN MEDICAL COLLEGE HOSPITAL

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ABSTRACT Pyrexia is the most common presentation in any hospital. Pyrexia can be treated as an outpatient, while some patients may require admission, investigation, management, and treatment. **Primary Objective:** To diagnose, treat and reduce complications. **Secondary Objective:** Utilizing all laboratory, x-ray, sonography and other special investigation as adjuvants in best institutional management. **Study Site:** Madha Medical College Hospital & Research Institute, Kancheepuram **Study Duration:** March 2018 to March 2019 **Total Number Of Patients:** 103 **Type Of Study:** Retrospective Observational Study **Conflict Of Interest:** Nil **Ethical Approval:** Obtained by college board **Need For Study:** There is significant morbidity with some mortality which can be investigated and managed in hospitals located on the outskirts and suburban areas. Most of the patients are below the poverty line and belong to the lower middle class, therefore, they cannot afford to reach the nearest tertiary hospital. **Materials And Methods:** A total of 103 patients, including 50 males and 53 females, were included in the study. All the patients were clinically evaluated and all necessary investigations were conducted. Symptomatic treatments for pyrexia, dehydration, oxygen therapy, etc., were administered. High-risk patients were transferred to the intensive care unit, while the remaining patients were admitted with case sheet recording for regular monitoring of vital parameters until a diagnosis was revealed through investigations and treated accordingly. **Discussion:** The majority of pyrexia is self-limiting, likely of viral origin, and some cases require symptomatic clinical treatment and antibiotics, along with basic patient investigation. In this study, the patients presented with severe dehydration, delirium, extreme weakness, and hematuria, which warranted admission. The treatment protocol we followed included initial dehydration correction and pyrexia control. Before starting the antibiotics, blood tests such as RFT, LFT, blood culture, urine routine and culture, X-ray, and sonography were conducted. Treatment was provided for all systems including CNS for meningitis, abdomen for any organomegaly, respiratory for infection and pleural effusion, CVS to identify carditis and valvular abnormalities, fluid resuscitation, and pain management. Heart rate, oxygen saturation, blood pressure, and other vitals were regularly checked for potential sources of infection. IV fluids, IV antibiotics, and diet advice were administered as part of follow-up care. Based on symptoms, clinical diagnosis, and investigative findings, appropriate treatment is started and followed for response. **Results:** We found that the number of females is higher by 3% in gender classification (table 1). The age distribution from 15 - 44 years is the highest, comprising more than 60% (table 2). Fever, cough, myalgia, UTI, and wound infections are the most common chief complaints (table 3). Type 2 diabetes and hypertension are the most common comorbidities, with over 50% (table 4). Dehydration, pyrexia, and tachycardia are seen in more than 65% of patients during clinical examination (table 5). Lab investigations showed leukocytosis, urine positive for infection, and malaria positive in over 35% of the patients (table 6). The primary diagnosis showed viral fever, UTI, infections, and CVS abnormalities in over 65% of patients (figure 1). Management of patients was done accordingly, with the majority of patients achieving full recovery. However, some patients were not able to receive treatment due to poor follow-up, while others had comorbidities that required referral. Additionally, some patients were not willing to undergo treatment due to their low socioeconomic status, and in some cases, their attendees were also not willing for treatment.

KEYWORDS :

INTRODUCTION AND REVIEW OF LITERATURE :

Since malaria is endemic in this suburban region, other causes noted are dengue, which has become endemic/epidemic, and interestingly, urinary tract infections are also seen. An epidemiological update on the fever presentation of spotted pyrexia in Brazil has been issued as a notifiable disease. Most of the fevers, around 70% of men, have case fatality rates, so surveillance is important to reduce morbidity and mortality. All patients suspected of headache, fever, and myalgia with a history of tick bite or contact with animals undergo diagnosis using serum titres of immunoglobulin G and indirect immunofluorescence assay, as well as PCR (1). Clinical epidemiology, based on a larger series of fever cases above 14,000, showed that secondary infections were more likely to occur in older patients than those with primary infections, with a p-value less than 0.001 (2). By comparing clinical and epidemiological data in young febrile patients with and without respiratory conditions during the pandemic SARS-COV-2, laboratory features differed in children with COVID-19 from those with urinary and bacterial infections, which is significant (3). In the pre-pandemic era, when there was no declaration by the World Health Organization, there was also difficulty in differentiating COVID-19 from other conditions (4). Occult bacteremia among febrile patients is a true bacteremia with a frequency of 19.6%.

The introduction of the pneumococcal conjugate vaccine significantly reduced occult bacteremia, but *Streptococcus pneumoniae* remains a

significant bacterial infection in the pediatric age group (5). Fever burden on patients with ischemic stroke differs in its influence on outcomes. In patients with high-grade fever of short duration or lower-grade fever of longer duration, the mortality is six times higher compared to low-grade fever with short duration. This study's cumulative effect results show that both the degree of fever and duration are key factors influencing post-stroke pyrexia (6). The occurrence of bacteremia and infective meningococcalitis with fever is high in younger people, and *E Coli* and *Streptococcus B* are the most common (7).

The incidence of q fever in the USA is increasing with the Food and Drug Administration's approval of the q fever vaccine (8). A study showed that 87% of hospitalized patients with high-grade fever mostly had bacterial infections in the higher age group (9). Some recent advances in q fever prevention include endocarditis prophylaxis with antibiotics, and the bacterium *Coxiella burnetii* is a zoonotic infection transmitted through aerosol, digestive, and cutaneous routes (10). Lower socioeconomic status is directly proportional to transmission (11). Viral infections and malaria are significant in number (12). Even in endemic areas, malaria is caused by other factors such as bacteria, zoonosis, viruses, tuberculosis, cryptococcal infections, and salmonella, leading to dominant febrile conditions (13). Tick-borne relapsing fever is more common in people travelling to endemic areas (14). Yellow fever can be present in certain zones due to travel and can

potentially cause viscerotropic and neurotropic diseases (15). The references mentioned above are used for comparison with this region.

Table No 1: The gender classification of patients based on the frequency and per cent.

GENDER CLASSIFICATION		
GENDER	FREQUENCY	PERCENT
Male	50	48.5
Female	53	51.5
TOTAL	103	100

Table No 2: The age classification of patients based on frequency and percent.

AGE DISTRIBUTION		
AGE	FREQUENCY	PERCENT
0-4 years	10	9.7
5-14 yrs	9	8.7
15-29 yrs	22	21.4
30-44 yrs	26	25.3
45-59 yrs	16	15.5
60-69 yrs	8	7.8
70-79 yrs	10	9.7
80+ Years	2	1.9
TOTAL	103	100

Table No 3: Chief complaints of patients based on frequency and per cent.

CHIEF COMPLAINTS		
COMPLAINTS	FREQUENCY	PERCENT
Fever with Myalgia, Generalized weakness	20	19.4
Fever with Chronic Cough, Night Sweats, Gradual Weight Loss, Loss of Appetite	8	7.7
Fever with Burning Micturition, Lower Abdomen Pain	19	18.5
Fever with Chills, Rigors, Body Aches, Generalised Weakness	11	10.7
Fever progressing to STEMI, Rheumatic Fever progressing to RHD, Endocarditis, CHF	16	15.5
Fever with Loose stools, Body Ache, Generalised Weakness, Abdominal Pain	2	2.0
Fever with Sore Throat, Cough, Headache, Loss of taste	8	7.7
Fever due to Diabetic Foot Ulcers, RTA, Accidental fall injuries, HAI (Hospital Acquired Infection)	19	18.5
Total	103	100

Table No 4: Underlying comorbidities of patients based on frequency and percent.

UNDERLYING COMORBIDITIES		
COMORBIDITIES	FREQUENCY	PERCENT
Type 2 Diabetes	24	30.8
Hypertension	15	19.3
Hypothyroidism	11	14.1
Hyperthyroidism	4	5.1
Coronary Artery Disease	11	14.1
Asthma	5	6.4
COPD	3	3.8
Rheumatic Heart Disease	3	3.8
Endocarditis	2	2.6
Total	78	100

Table No 5: Clinical Examination of patients based on frequency and per cent.

CLINICAL EXAMINATION		
	FREQUENCY	PERCENT
Pyrexia	31	30.1
Dehydration	16	15.5
Tachycardia	22	21.4
Hypoxemia	5	4.9

Tachypnea	3	2.9
High Blood Pressure	9	8.7
Low Blood Pressure	6	5.8
Hypoglycemia	4	3.9
Hyperglycemia	7	6.8
TOTAL	103	100

Table No 6: Investigation taken based on the frequency and per cent.

INVESTIGATIONS		
	FREQUENCY	PERCENT
Leukocytosis	16	15.6
Blood Culture	4	3.9
Mantoux (+)	6	5.8
Sputum AFB	2	1.9
Urine Routine	13	12.7
Urine Culture	6	5.8
MP / MF	11	10.7
CRP	4	3.9
ESR	9	8.7
ECG	3	2.9
Fecal Occult Blood Test	2	1.9
Chest X-Ray: Consolidation	4	3.9
HRCT Chest: Ground Glass Appearance	4	3.9
Serum Amylase	7	6.8
USG - Abdomen	6	5.8
Wound Swab	6	5.8
TOTAL	103	100

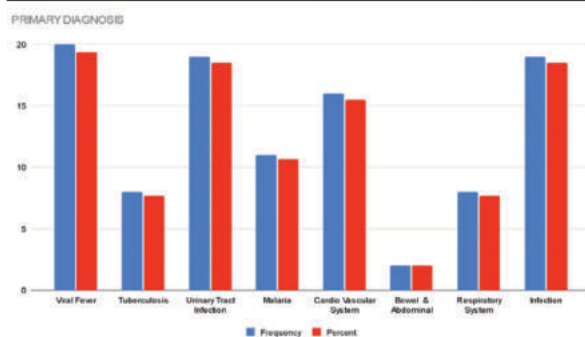


Figure No 1: Primary diagnosis of the patient based on the frequency and per cent.

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