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TO STUDY THE DEMOGRAPHIC PROFILE OF CLASSIC FUO

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Abstract
Background: To study the demographic profile of classic FUO
Methods: It was a cross sectional study of one year duration performed from 1st June 2013 to 31st May 2014 in department of Medicine I.G.M.C. Shimla. Patients above 18 year of age and who fulfilled the Durack and Street criteria of FUO were included in the study
Results: Mean age was 33 years (range 18 to 71 years). Thirty one patients were male (68%) and fourteen patients were female (32%).
Conclusion: Most of patients was young male.
Keywords: Age, Sex, FUO, PDCs

Introduction

Fever[1] is an elevation of body temperature that exceeds the normal daily variation and occurs in conjunction with an increase in hypothalamic set point. *An a.m. temperature of >37.2°C (>98.9°F) or a p.m. temperature of >37.7°C (>99.9°F) defines a fever.* The normal daily temperature variation is typically 0.5°C (0.9°F).

Patients with fever usually exhibit warm, flushed skin, tachycardia, involuntary muscle contractions or rigors, and sweating or night sweats. Piloerection and positioning of the body in an attempt to minimize exposed surface area are also seen.

The term pyrogen is used to describe any substance that causes fever by raising the thermostat of hypothalamus. *Exogenous* pyrogens are derived from outside the patient; most are microbial products, microbial toxins, or whole microorganisms. The classic example of an exogenous pyrogen is the lipopolysaccharide (endotoxin) produced by all gram- negative bacteria. Pyrogenic products of gram-positive organisms include the enterotoxins of Staphylococcus aureus and the group A and B streptococcal toxins, also called superantigens.[2]

Material and methods

Design of the study

This was a cross sectional study of one year duration and was performed in the Department of Medicine in I.G.M.C. Shimla.

Inclusion criteria

Only patients above 18 years of age were included in the study.

Only those patients who fulfill the Durack & Street criteria of classic FUO were included in the study i.e.

(1) Temperature of > 38.3°C (101°F) on several occasions,

(2) A duration of fever of > 3 weeks and,

(3) Failure to reach the diagnoses despite 3 days of hospital.

Exclusion criteria

Patient with neutropenia (absolute neutrophil count<500/ml) patient developing fever 48 hours after hospital admission and human immunodeficiency virus (HIV) positive patients were excluded from study.

Method of study

After initial history taking and thorough physical examination, the patients were subjected to routine investigations. The history taking and investigations are discussed in detail in the proforma.

Investigations

Haematological profile-Hb, TLC, DLC, ESR, Platlet count by sm-9haematological analyser.

Biochemical profile

FBS/RBS, LFT, RFT, Electrolytes was done by KONE LAB 30fully automatic analyser.

Results

Table 1: Distribution by age

AGE GROUP	NO OF CASES	FREQUENCY (%)
18-40	34	76%
41-60	10	22%
>60	1	2%
Total	45	100%

Table 2: Distribution by sex

AGE GROUP	MALE	FEMALE	TOTAL
18-40	21(46.7%)	13(28.9%)	34(75.6%)
41-60	9(20%)	1(2.2%)	10(22.2%)
>60	1(2.2%)	0	1(2.2%)
Total	31(69%)	14(31%)	45(100%)

We observed that 69% of patients were male and 31% of patients were female in our study

Table 3: Demographic characteristics

DISTRICT	MALE	FEMALE	TOTAL	FREQUENCY
SHIMLA	12	7	19	42%
MANDI	5	1	6	13%
KULLU	3	2	5	11%
SOLAN	3	1	4	9%
HAMIRPUR	3	1	4	9%
BILASPUR	3	1	4	9%
SIMOUR	1	1	2	5%
KINNAUR	1	0	1	2%

Table 4: Distribution Rural vs. Urban

AGE GROUP	RURAL	URBAN	TOTAL
18-40	25	9	34
41-60	6	4	10
>60	1	0	1
Total	32(71%)	13(29%)	45

In our study 71% of patients were from rural background while 29% of patients were from urban background.

Discussion

Forty-five patients who were above 18 years of age and fulfilled the Durack and Street criteria of classic FUO admitted in the department of Medicine, Indira Gandhi Medical College Shimla, between May 2013 and June 2014 were included in the study.

We stratified the patients into three age groups i.e. young agegroup: 18-40 years, middle aged 41-60 years and elderly 61 years and above. Mean age of the patients was 33 years in our study. The young age group consisted of maximum number of patients i.e. 34 (76%). Knockaert et al,[3] Bleeker Rovers et al,[4] De Kleijn et al,[5] Shoji et al,[6] Goto et al[7] as well as Mashasi et al[61] reported the mean age of 47.7 years, 54 years, 53 years, 53.5 years, 50 years and 55 years respectively. Whereas D. Kejriwal et al[8] and Handa et al[9] reported 32.4 years and 29.57 years respectively. Lower mean age of patients in our study may be explained by fact that India like other developing countries, mainly consist of young population and our findings are similar to the studies of Kejriwal et al andHanda et al.

There were 31 male patients (69%) and 14 female patients (31%). Male to female ratio was 2:1. There was male predominance in our study. Male predominance was also reported by Jung et al[10] with 64.4% male patients, similarly Mir et al[11] had 68% male patients. Female predominance was reported by De Kleijn et al,[5] Zenone et al[12] and Bleeker Rover et al[4] with 53%, 54.9% and 54.8% female patients respectively and almost equal sex percentage was reported by Shoji et al[50] having 51% male and 49% female patients. In the country like India, there is male dominant society having more ready access to health care facilities and this fact explains the male predominance in our study.

Our study documented highest number of patients from Shimla district comprising 42% of patients followed by Mandi district (13%), Kullu district (11%), Solan, Hamirpur and Bilaspur district each comprising 9% of patients. Since our institute is situated in Shimla district, so we had highest number of patients from this region. We reported no patients from Kangra and Una district due to

their vicinity to medical college (Dr. RPGMC, Tanda) in Kangra district and health institutes of neighboring states, which serves the health needs of that region.

Seventy one percent patients in our study were from rural background. Himachal Pradesh is an agricultural state and according to the census-2011, 89.97% of population of Himachal Pradesh lives in villages, so we had proportional number of patients from rural background.

Conclusion

Most of patients were young male.

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