

Incidence of Hypothermia in Post Operative Period

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Abstract

Background: Post operative hypothermia in surgical patients is a commonly observed complication. But the knowledge and skills of the peri operative nurses can help to reduce or prevent the occurrence of post operative hypothermia.

Objective: Objective of this study was to find out incidence of post operative hypothermia.

Method: a hospital based observational study was undertaken. The postoperative patients (N=250) that underwent anaesthesia were included. The assessment and body temperature of patient was measured post operatively. Analysis was done using the software SPSS version 26.00.

Results:

Total 250 post operative patients were included in the study. Among them 185 (74%) patients had developed post operative hypothermia. Mean of age of hypothermia patients were 45.74. Majority of patients 63 (34.1%) had hypothermia patients were illiterate or no education. The majority of subjects 96 (51.9%) had hypothermia they were in rural residence.

Conclusion: The occurrence of post operative hypothermia in recovery room at post operative period was high. Total 250 post operative patients were included in the study. Among them 185 (74%) patients had post operative hypothermia. The majority of samples 50% were having age between the 19 to 40 years.

Keywords: *Hypothermia, Temperature, post-operative, recovery room (PACU), ICU.*

INTRODUCTION

The mortality rate for institutionalized elderly patients is within the 50 to 80 % . range reported for American elderly populations. (Which possibly included institutionalized and non institutionalized groups), though we should stress that 50 percent of deaths from hypothermia among American elderly individuals occur in their homes. Other side, the mortality rate is higher than those found in other studies of hypothermia in the general population. In studies conducted on only elderly subjects, though not institutionalized elderly, mortality rates range from 34.0 to 52.0 %. The numbers allows considering whether the mortality rate for institutionalized elderly should not in fact be higher than for the no institutionalized patients. The literature also mentions that half of the cases of hypothermia admitted to emergency services in the US are of elderly patients. They concluded that there was a 7.2 % annual prevalence of accidental hypothermia in this sample of institutionalized elderly, whose mean age was 76.4 years. the most common co morbidities among the institutionalized elderly included systemic hypertension (91.4%), dementia syndrome (71.4%), immobility (68.6%), pressure ulcer (68.2%), and previous history of acute cerebrovascular attacks (57.2%); accidental hypothermia was mainly secondary to bronchopneumonia (80.0%) and urinary tract infections (60,0%); there was a 62.8 percent mortality rate for this population during hypothermia or after reversal.³

METHODS:

After institutional ethical approval the present study was started. Hospital based observational study was conducted from April 2021 to April 2022. The study was conducted at tertiary care hospital, Karad, Maharashtra and the areas was Recovery Room, Surgical ICU and Surgery wards. Post operative patients who were above 18 years and operated at tertiary care hospital, Karad, Maharashtra.

Inclusion criteria:

A post operative patient whose age is > 18 years, who's underwent surgery with anaesthesia; those are willing and available at the time of data collection.

Exclusion criteria:

Patients who are having mental illness, Burn patient and Cardiac surgery patients were excluded.

Analysis:

Data was analyzed by using descriptive statistics. The data were entered in excel sheet and clean up then by using software SPSS version 26.00 analysis was done.

RESULTS:

Table 1: Incidence of hypothermia with age

Age group (years)	Frequency	Percentage
19-40	96	51.89 %
41-60	37	20 %
61-80	45	24.32 %
80-100	7	3.7 %

Table 1: shows that, total 250 post operative patients were included in the study. Among them 185 (74%) patients had post operative hypothermia. Mean of age of hypothermia patients were 45.74. The majority 96 (51.89%) patients had hypothermia they belong to age 19- 40 years age group.

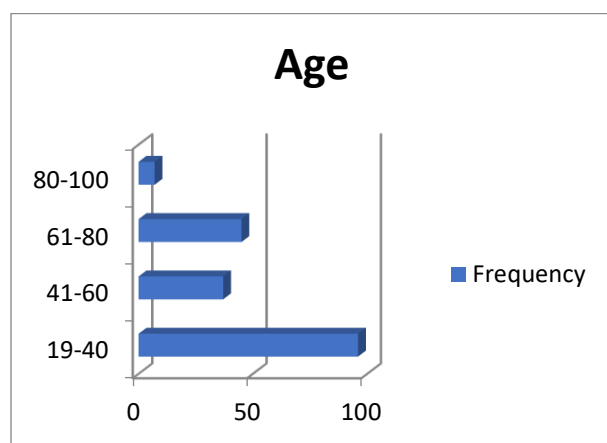


Table 2: Incidence of hypothermia with Gender

Factor	Frequency	Percentage
Gender:		
a) Male	76	41.1%
b) Female	109	58.9%

Table 2 shows that, the majority 109 (58.9%) female patients had hypothermia.

Table 3: Incidence of hypothermia with Education

Factor	Frequency	Percentage
Education:		
a) No education	63	34.1%
b) Primary	48	25.9%
c) Secondary	40	21.6%
d) Higher secondary	25	13.5%
e) Graduate & above	9	4.9%

Table 3, shows that, the majority of patients 63 (34.1%) had hypothermia patients were illiterate or no education whereas the Graduate

& above educated patients had developed hypothermia only 9 (4.9%)

Table 4: Incidence of hypothermia with Occupation

Factor	Frequency	Percentage
Occupation:		
a) Skilled workers	35	18.9%
b) Farmer	84	45.4%
c) Home maker	43	23.2%
d) Student	11	5.9%
e) Working on own field	12	6.5%

Table 4 shows that, the majority of subjects 84 (45.4%) had hypothermia they were having farmers whereas minimum subjects 11 (5.9%) had hypothermia they were students.

Table 5: Incidence of hypothermia with Monthly Income

Factor	Frequency	Percentage
Monthly family income: (Rs)		
a) 30000-39999	1	0.5%
b) 20000-29999	25	13.5%
c) 11000-19999	79	42.7%
d) 4000-10999	76	41.1%
e) 3999 & below	4	2.2%

Table 5, shows that, the majority of subject 79 (42.7%) had hypothermia were having monthly income between 11000-19999 Rs.

Table 6: Incidence of hypothermia with residence

Factor	Frequency	Percentage
Residence		
a) Rural	96 (51.9%)	51.9%
b) Urban	89 (48.1%)	48.1%

Table 6, shows that, the majority of subjects 96 (51.9%) had hypothermia they were in rural residence.

DISCUSSION:

Total 250 samples were included in this phase of study, among them half 125 (50%) patients belonged to the age group of 19 - 40 years. The mean age of the samples were 39.13 years and the majority 145 (58%) were females. These findings are similar with the study conducted by, Tadesse Belayneh et al. the majority 205 (53%) was and majority of samples 200 (52%) were females but age group was somewhat different. The mean age 39 years was similar with the study conducted by, Fabricio Tavares Mendonca et al.¹⁶

In the present study majority of samples 81 (32.4%) had found no formal education the majority of samples 115 (46%) were farmers in occupation and the majority of samples 116 (46.4%) had monthly income between Rs 4000 to 10999 but there was no evidence of literature found that this factors were included.

In the present study, the majority of samples 128 (51.2%) were from the rural area admitted in tertiary care hospital but there was no any evidence of literature found regarding residency of samples but the study conducted by D. Karalapillai et al. had some inconsistency findings from the hospital type were 46% samples from private hospitals, 30% samples from tertiary care, 17% samples from metropolitan and 7% samples from rural hospitals type.¹⁵

Limitation of study:

This study includes only post operative patients above 18 years.

Conclusions and recommendation:

The occurrence of post operative hypothermia in recovery room at post operative period was high. Total 250 post operative patients were included in the study. Among them 185 (74%)

patients had post operative hypothermia. The majority of samples 50% were having age between the 19 to 40 years. All the surgical peri-operative team should be included to reduce the risk of post operative hypothermia and other complications for better prognosis of patient.

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