

Measurement of Temperature in a Tertiary care Hospital — an Observational Study

Dr Rukhsana Parvin

Assistant Professor

Enam Medical College and Hospital

Introduction

- The measurement of body temperature determines whether a person has fever.
- Presence of fever affects decision of clinicians.
- Many ward rounds would be incomplete without routine scanning of temperature chart at the end of the patient's bed.
- Accurate temperature measurement is required in certain clinical situations or patients group.

- **False high readings** may lead to expensive and painful diagnostic studies and medical interventions.
- **False low readings** may lead to greater morbidity and mortality.
- Accurate measurement of temperature provides useful clues about the severity of illness.

AIM

To observe the measurement technique of temperature by health personnel in different wards of Enam Medical College and Hospital, Savar.

METHODS AND MATERIALS

- Single blinded prospective observational study
- Done among 50 health personnel including nurses and brothers in Enam Medical College.
- A 9 pointed self-administered questionnaire was supplied to the 3 working doctors in the department of Medicine, Paediatrics, Surgery and Obstetrics and Gynecology.
- The duration of study was 60 days.

Questionnaire

- What type of thermometer it is?
 - Mercury
 - Tympanic
 - Digital
 -
- Which site usually chosen?
 - Oral
 - Axilla
 - Rectam
- Do you wash or sterile thermometer before using?
 - Yes
 - No_{oo}
- Do you ask patient whether he took any hot or cold food or did any exercise within 30 mins?
 - Yes
 - No
- How long you keep thermometer in site?
 - 30 sec
 - 1 min
 - 1 min 30 sec
 - 2 min
- Do you declare the temperature record to the patient?
 - Yes
 - No
 -
- Do you wash it after using?
 - Yes
 - No
 -
- Do you document the findings immediately after measuring temperature?
 -
 - Yes
 - no

Statistical Methods

- The results were recorded as percentage of health personnel performing the measurement.

Results

Type of Thermometer

- 98% of the health personnel used mercury thermometer whereas 2% used digital thermometer



Site of Preference

- 96% preferred axilla and 4% chose oral cavity for measuring temperature



- 48% washed the device before using.
- 22% explained the procedure to the patients according to age.

- Only 6% asked if the patient had taken any cold or hot drinks within last 30 minutes or had done any exercise.

Dwell Time

- 10% kept the thermometer at the site for 30 seconds
- 76% for 1 minute
- 2% for 1 minute and 30 seconds
- 12% for 2 minutes.

- 44% washed the thermometer after using



Declaration

- 70 %
declared the
patient about
the
temperature
measurement



Documentation

- 88% documented the temperature record immediately after measuring.

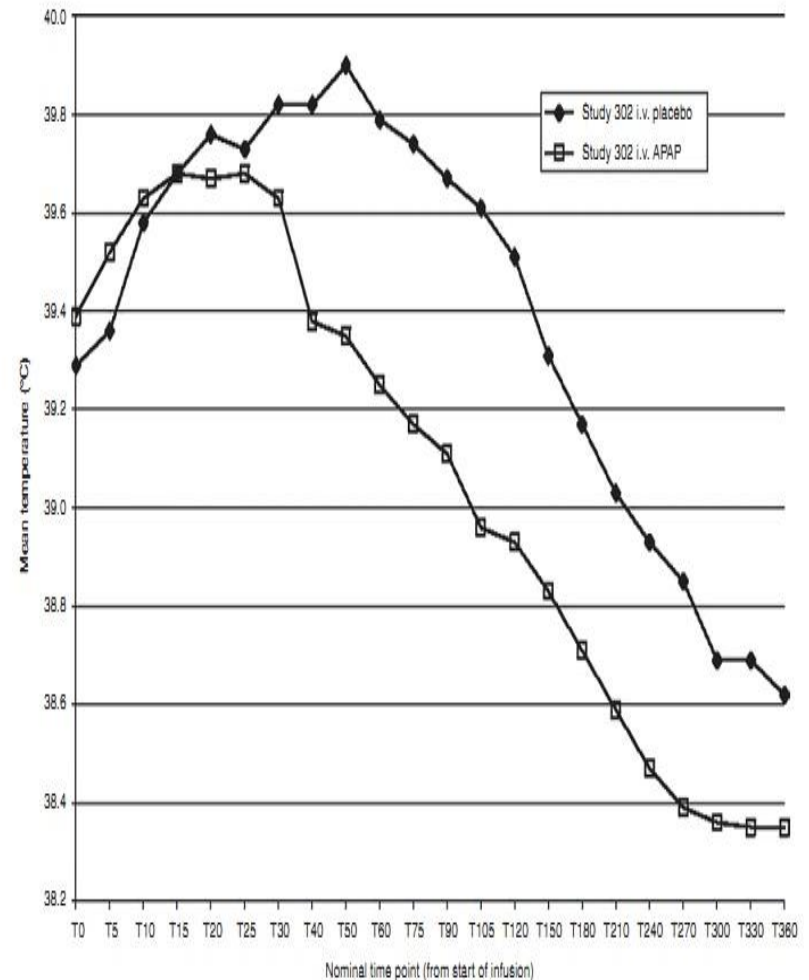


Figure 2 Temperature (°C) over time from T0 through T360 min (modified intent-to-treat (mITT) population). This analysis was conducted after censoring data obtained after the time point of rescue medication requests. $P < 0.05$ for T30, T40, T50, T60, T75, T90, T105, T120, T150, T180, T210, T240, T270, T300, and T330 (analysis of covariance). APAP, acetaminophen; i.v., intravenous.

Conclusion

- Current performance is very poor.
- Lack of education and increased burden of patients might be contributing factors.
- Simple education and proper practice would help to improve this technique.
- We recommend use of digital thermometer or tympanic thermometer in the wards for accurate measurement of temperature.



**THANK
YOU**