



() -

*

**

()

$r = \frac{1}{2}$ (P < / $r = \frac{1}{2}$) (P < / $r = \frac{1}{2}$) (P < / $r = \frac{1}{2}$) (P < / $r = \frac{1}{2}$)

/ / /

:

/ / : / / :

.()

.()

.()

.()

.()

(Core)

.()

.()

.()

.()

.()

.()

()

.()

:

()

()

/

/

()

:

(Omron gentle temp 510)

()

(Omron flex temp cE 0197)

(Omron pro temp cE 0473)

(cut off point)

/

:

:

(Roc Curve)

:

()

(Multi-variate regration)

.(/ /)

.()

(P< / r= /)

(P< / r= /)

(P< / r= /)

(P< / r= /)

P< / r= /

.()

.(P< /)

P< / r= /

)

()

.() (P< / r= /)

(

.(P< /)

.(P< /)

()

/

/

()

/

/

.()

.(P< /)

.()

.()

(Frarra-Love)

)

(

.()

.()

)

(r= /)

(

.() (r= /)

()

.()

δ

.()

.()

.()

.()

.()

()

ICU

.()

References:

1. Leitao p. measuring temperature. Practice Nursing. 1989; 9: 25-7.
2. Gilbert M, Barton AJ, Counsel CM. comparison of oral and tympanic temperatures in adult surgical patients. Appl Nurse Res 2002; 15: 42-7.
3. Robinson JL, Seal RF, Spady DW, et al. Comparison of esophageal, rectal, axillary temperatures. J pediat 1998; 133: 553-6.
4. Robinson JL, Seal RF, Spady DW, et al. Comparison of esophageal, rectal, axillary, bladder, tympanic, and pulmonary artery temperatures in children. J Pediatr 1998; 133: 553-6.
5. Potter PA, Perry AG. Fundamentals of nursing. 2nd ed. Australia: Elsevier, 2005, 611-28.
6. Frank JD, Brown S. Thermometers and rectal perforations in the neonate. Arch Dis Child 1978; 53: 824-5.
7. Bliss Holtz J: Comparison of rectal, axillary temperature. Nurs Res 1989; 38: 85-7.
8. Craig JV, Lancaster GA, Williamson PR, et al. Temperature measured at the axilla compared with rectum in children and young people: systematic review. BMJ 2000; 320: 1174-8.
9. Bailey J, Rose P. Axillary and tympanic membrane temperature recording in the preterm neonate: a comparative study. J Adv Nurs 2001; 34: 465-74.
10. Browne S, Coleman H, Geary E, et al. Accurate measurement of body temperature in the neonate. Journal of neonatal nursing 2000; 6: 165-8.
11. Shinozaki T. Infrared tympanic thermometer. Critical care medicine 1998; 16: 148-50.
12. Greens DS. Accuracy of a noninvasive temporal artery thermometer for use in infants. Arch Pediatr Adolesc Med. 2001; 155: 376 –81.
13. Yetman R. Comparison of temperature measurements by an aural infrared thermometer with measurement by traditional rectal and axillary techniques. J of pediat 1993; 122: 769-73.
14. Beckstrand RL, Wilshaw R, Moran S, Schaalje GB. Supralingual temperatures compared to tympanic and rectal temperatures. Pediatr Nurs 1996; 22: 436-8.

15. Bernardo LM, Clemence B. A comparison of aural and rectal temperature measurements in children with moderate and severe injuries. *J Emerg Nurs* 1996; 22: 403-8.
16. Brennan DF, Falk JL, Rothrock SG. Reliability of infrared tympanic thermometer in the detection of rectal fever in children. *Ann Emerg Med* 1995; 25: 21-30.
17. Edge G, Morgan M. The genius infrared tympanic thermometer. An evaluation for clinical use. *Anaesthesia* 1993; 48: 604-7.
18. Whalley M, Wong D. Nursing care of infant and children. 7th ed. Mosby Co, 2003, 178-9.
19. Nackton TL, Goldreich D. A comparison of 2 methods of measuring rectal temperature with digital thermometry. *Am J of critical care* 2001; 10: 146-51.
20. Murray SS, McKinney ES. Foundation of maternal-newborn nursing. 4th ed. America: Saunders co., 2006, 469-78.
21. Stewart JV, Webster D. Re-evaluation of the tympanic thermometer in the emergency department. *Ann Emerg Med* 1992; 21: 158-61.
22. Childs C, Harrison R. Tympanic membrane temperature as a measure of core temperature. *Arch Dis Child*. 1999; 80: 262-6.
23. Rogers J, Curley M, Driscoll J, et al. Evaluation of tympanic membrane thermometer for use with pediatric patients. *Pediatr Nurs* 1991; 17: 376-8.
24. Weiss ME. Tympanic infrared thermometry for full-term and preterm neonates. *Clin Pediatr* 1991; 30 Suppl 4: 42-5.
25. Brennan DF, Falk JL. Reliability of infrared tympanic thermometer in the detection of rectal fever in children. *Ann Emerg Med* 1995; 25: 21-30.
26. Lanham D.M, Walker B. Accuracy of tympanic temperature readings in children under 6 years. *Pediatr Nurs* 1999; 25: 39-42.
27. Ferrara-Love R. A comparison of tympanic and pulmonary artery measures of core temperatures. *J Post Anesth Nurs* 1991; 6: 161-4.
28. Van Berkel M, Jooren MC, Timmermans A, et al. The ear thermometer; not a good replacement for the rectal thermometer. *Ned Tijdschr Geneeskde* 1998; 142: 2102-5.
29. Erikson RS, Woo TM. Accuracy of infrared thermometry and traditional temperature methods in young children. *Heart Lung* 1994; 23: 181-95.
30. Chamberlain JM, Terndrup TE, Alexander DT, et al. Determination of normal ear temperature with an infrared emission detection thermometer. *Ann Emerg Med* 1995; 25: 15-20.
31. Houlder LC. The accuracy and reliability of tympanic thermometry compared to rectal and axillary sites in young children. *Pediatr Nurs* 2000; 26: 311-4.
32. Starem K, Saxholm H. Accuracy of infrared ear thermometry in adult patients. *Intensive Care Med* 1997; 23: 100-5.
33. Rotello LC. Comparison of infrared ear thermometer derived and equilibrated rectal temperatures in estimating pulmonary artery temperatures. *Crit Care Med* 1996; 24: 1501-6.