

Tympanic and Rectal Temperatures in Febrile Children

We have the following comments to offer on the published article(1) on this subject:

- (a) Tympanic membrane was taken as the site of recording temperature because it is having same arterial supply as that of hypothalamus—the thermoregulatory center. The tympanic membrane is supplied by maxillary artery and stylo-mastoid branch of occipital or the post-auricular artery which are the branches of external carotid artery(2), whereas hypothalamus is supplied by branches of internal carotid artery(3).
- (b) The mean temperature of tympanic membranes was recorded. If the arterial supply of hypothalamus and tympanic membrane is same - a basis of this study (which is not), the temperature should have not differed in two tympanic membranes.
- (c) Tympanic membrane temperature (TMT) is higher (statistically significant) than rectal temperature (RT) in the meningitic group than the control group. TMT is also higher than RT (though statistically insignificant) in control group. Authors have made a point that TMT is higher in meningitic group as tympanic membrane is proximate to inflamed meninges. A thin plate of compact bone, the tegmen tymani

separates the cranial and tympanic cavities(2). Higher TMT is not explainable in control group.

- (d) It is not clearly stated in the article whether or not the lumbar puncture has been done in control group. If lumbar puncture has not been done in control group:

- (i) There are the chances of including cases of meningitis (positive on CSF profile only), in that event control group children will behave as case group.

- (ii) The comparison of TMT with RT is related only to case group without comparing the control group.

**K.K. Locham,
Manpreet Sodhi,**

*Department of Pediatrics,
Government Medical College,
Rajindra Hospital,
Patiala 147 001, India.*

REFERENCES

1. Sehgal A, Jyothi MC, Dubey NK. Comparison of tympanic and rectal temperatures in febrile children. *Indian Pediatr* 2003; 40: 135-140.
2. Berry M, Bannister LH, Standring SM. Nervous system. *In: Williams PL, Bannister LH, Berry MM, Collins P, Dyson M, Dussek JE, Ferguson MWJ, editors. Gray's Anatomy, 38th ed. Edinburgh: ELBS; 1995: p. 901-1397.*
3. Glabella G, Cardiovascular. *In: Williams PL, Banister LH, Berry MM, Collins P, Dyson M, Dussek JE, Ferguson MWJ, editors. Gray's Anatomy, 38th ed. Edinburgh: ELBS; 1995: p. 1451-1626.*