

## 저체온요법 치료 환자에서의 두개강내와 액와부의 온도차이\*

가  
유도성 · 김달수 · 허필우 · 조경석 · 김재건 · 박춘근 · 강준기

= Abstract =

### Temperature Difference Between the Brain and Axilla in Patients Under Hypothermia

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**Objective** : The brain temperature is about 0.4 - 1 higher than that of the other peripheral body area. But most of these results have been obtained in normothermic condition. The objective of this study is to evaluate the temperature difference between the brain and axilla, in patients under hypothermia.

**Methods** : Sixty - three patients (37 women and 26 men) who underwent craniotomy with implantation of the thermal diffusion flowmetry sensor were included in this study. The temperature of the cerebral cortex and axilla was measured every 2 hours, simultaneously. The patient group was divided according to axillary temperature hyperthermia (over 38 ), normothermia (36 - 38 ) and hypothermia (under 36 ). Total 1671 paired sample data were collected and analyzed.

**Results** : The temperature difference between the cerebral cortex and the axilla was  $0.45 \pm 1.04$  in hyperthermic patients,  $0.97 \pm 1.1$  in normothermic patients and  $1.04 \pm 0.81$  in hypothermic patients. The temperature difference has statistical significance in each group (unpaired t - test,  $p < 0.05$ ).

**Conclusion** : From our study the temperature difference between the brain and the axilla in hypothermic condition increased more than that of normothermic state. And in hyperthermic condition, the temperature difference decreased.

**KEY WORDS** : Hypothermia · Hyperthermia · Temperature · Brain temperature · Axillary temperature.

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**대상 및 방법**

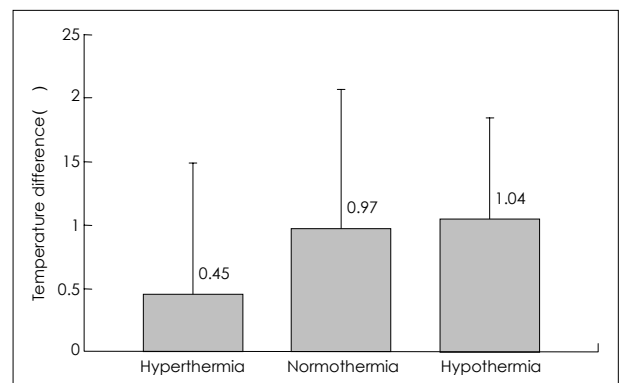
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36.0~38.0  
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 1, Fig. 1).  
 (p<0.05).

**고 찰**

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**Fig. 1.** Temperature differences between the brain and axilla according to the patients' axillary temperatures.

**Table 1.** Temperature differences and correlations according to the patient conditio

Patients Condition	Number of Cases	Temperature ( )	Correlation(axilla & brain)
Hyperthermia (over 38 )	124	38.85 ± 1.03 38.40 ± 0.58	0.45 ± 1.04* 0.254*
Normothermia (36 - 38 )	1560	37.79 ± 1.69 36.89 ± 0.52	0.97 ± 1.1* 0.228*
Hypothermia (under 36 )	285	35.76 ± 1.21 34.73 ± 1.40	1.04 ± 0.81* 0.816*

\* : statistical significance (p<0.05)



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