Dear Editor-in-Chief,

Thank you for giving me the chance to revise the manuscript, again. I would like to emphasize the clinical character of this study, not a basic research character, made for clinical settings to determine thermography as a future device of confirming diagnosis.

Reviewer 1 (Jim Waterhouse) refers to his original report. In my last revision, I have already done changes and marked them.

In this revision, I performed some further changes due to the review from April 2006 of Jim Waterhouse.

Corrections (highlighted in yellow in revised text) and comments step by step:

Abstract:
The 4 h intervals were now mentioned explicitly

Introduction:

- The relevance of figure 1 with the description in the text is to show readers with not so closely related research interests but related clinical interests the mechanism of thermoregulation in an elementary way, indeed.

- We didn’t say “different regions of the skin of the body reflect circadian rhythmicity differently”, we only said that “the physiological skin temperature profile shows a temperature decline from the face through the abdomen to the feet”. So the question of circadian rhythms of different body areas is not raised.

Methods:

- The reviewer wrote that “the elbow as a reference point for core temperature is not acceptable”. We agree, this reference point leads to a misunderstanding. As described in the results section in the revision before, “adjustment of the values by excluding the reference values for both elbow regions”, this elbow-reference point dropped out. Only for completeness we mentioned it. So in this revision, we excluded and delete that point completely.

- For 2.00 and 6.00 we had no special arrangement, we already had a 15 min adjustment time in the standardized room. We do not see a problem of sleep loss with regard to thermoregulation: As described in the results section, although the greatest fluctuations in surface temperatures were found between the temperatures determined at 2 a.m. and 10 p.m. (Fig.4), changes in temperature following application of the cold stimulus in identical groups of measuring sites showed non-significant fluctuation ranges.

Results:

- “Isoline (0°) indicates mean data from the reference points (glabella)”. This remark was now added in legend to figure 3; the legend was already changed to make bars and lines clearer during the last revision. Further it was said in the text: “After measurement of the glabella as reference value all further results were recorded as positive or negative deviations from the reference value”.

Legend of fig 4 was completed, saying that the two presented measurements give an example of fluctuation of temperature.

For this clinical trial, we are not convinced that performing ANOVA or MANOVA will present us new aspects or more significant results. We don’t intend to make this clinical study complicated and unclear by using further statistical devices without gain. However, Reviewer 2 agrees to the present statistical analysis we performed.

Corrections and comments due to reviewer Michel B Ducharme

Corrections were highlighted in blue

- Abstract: The contradiction was caused by a mistake in the abstract and was corrected
- Point 2 was corrected

Refering to initial review:

- Point 6: Remarks concerning dressing of subjects were added
- Point 8: Measurement of core temperature dropped out of study
- Point 9: Explanation concerning measurement 2.00 and 6.00 a.m. was given
- Point 12: follows point 8
- Points 14, 15 and 16 concerning figures and legends:
- Figures 3 – 5 were transformed in an exel format. Changes of figure and legends were performed due to the reviewer’s suggestions.

I hope this second revision will satisfy you.

With kind regards

Jan Rustemeyer