



The effects of skin to skin maternal contact on body temperature, oxygen saturation of newborns



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Introduction

Skin to skin contact mean placing the naked infant, prone, on the mother’s bare chest or abdomen, and covering both with a warm blanket. After delivery, While the mother’s skin will help regulate the infant’s temperature, promote frequent breastfeeding and enhance maternal-infant bonding.

Purpose

The purpose of research was to Compare body temperature and oxygen saturation of newborns between placing newborns under a radiant warmer and skin to skin contact

Methods

This quasi experimental research. Random sampling method was used to select 60 full-term newborns in the labor room at Ramathi-bodi Hospital. The subjects were equally, randomly assigned into two groups. The first group was kept warm by placing under a radiant warmer, while the second group was skin to skin contact of mother and the newborn. In Group 1, newborns wore a diaper, a hat, and wrapped with a dry cloth. The newborns slept under a radiant warmer. In Group 2, newborns also wore a diaper and a hat, but without wrapping with a dry cloth. The newborns laid face down on mothers’ bare chests. Mothers were covered with a blanket.

Results

The results showed that average body temperature of newborns, within two hours of both groups, were at a normal level. But, within the first 30 minutes, the average temperature difference of the Group 1 was significantly statistical higher than Group 2. The results implied that both groups could maintain body temperature of the newborns at normal levels. But, Group 2 that was embraced with skin to skin contact, newborns had a higher increasing rate of body temperature than Group 1. However, the average temperature difference of the newborns, in the first 60 minutes measured at 30 and 60 minutes, was not statistically significant. The average levels of oxygen saturation in both groups were at the normal levels between 98.10 to 99.17%. The difference between the average levels of oxygen saturation in both groups during and after the trials had no significant different result.

Table 1: Body temperature between radiant warmer and skin to skin (N=60)

| Temperature (°C) | Radiant warmer | | skin to skin contact | | t | p |
|-------------------|----------------|------|----------------------|------|--------|------|
| | Mean | SD | Mean | SD | | |
| Before experiment | 36.93 | 0.27 | 36.87 | 0.25 | .840 | .405 |
| Experiment | | | | | | |
| 30 minute | 36.54 | 0.25 | 36.79 | 0.20 | -1.496 | .000 |
| 60 minute | 36.87 | 0.22 | 36.90 | 0.20 | - .432 | .668 |
| After experiment | | | | | | |
| 30 minute | 37.04 | 0.20 | 36.98 | 0.17 | 1.399 | .186 |
| 60 minute | 37.02 | 0.12 | 37.07 | 0.13 | -1.378 | .174 |

*p < .01

Mean of body temperature (°C)

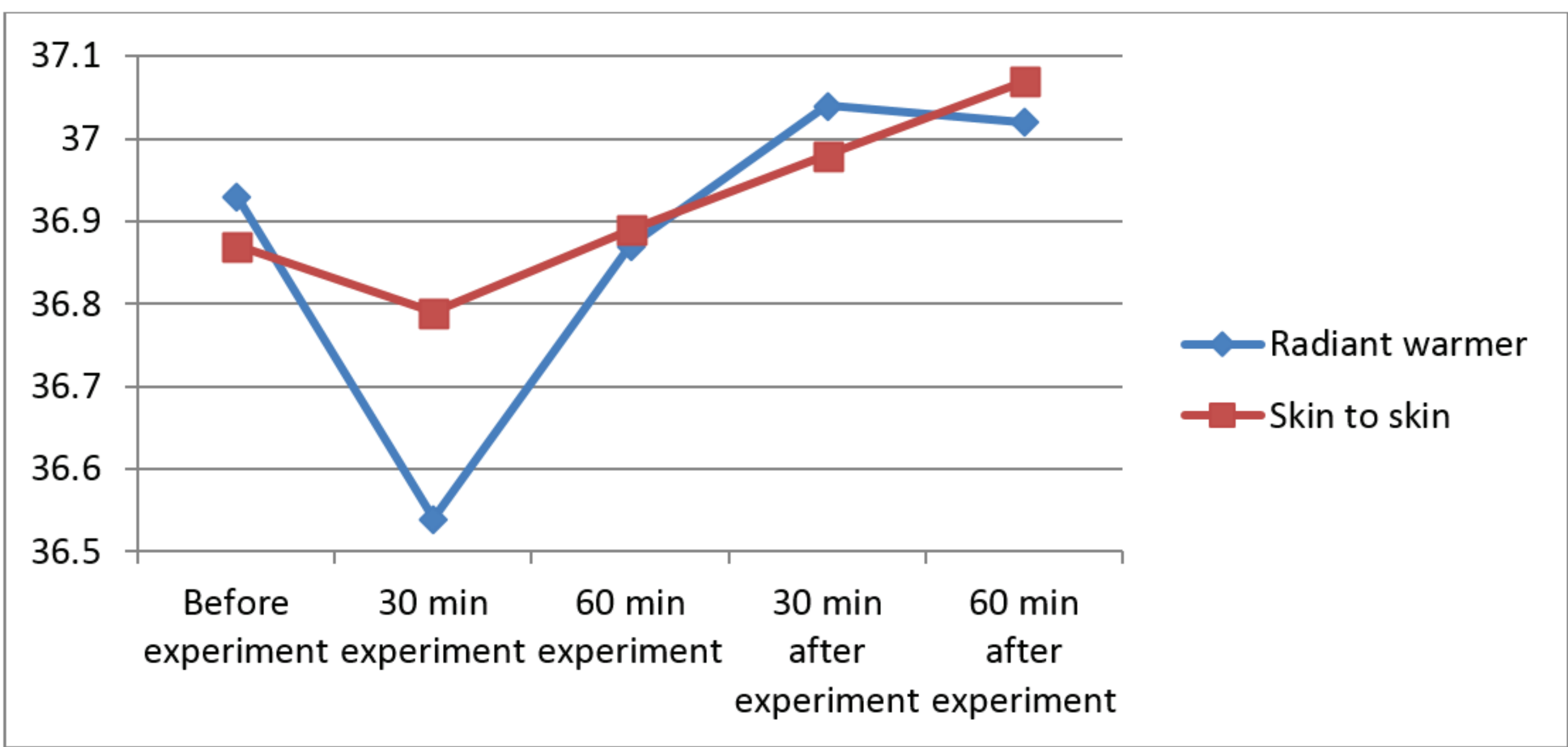


Table 2: Comparison of the difference body temperature between radiant warmer and skin to skin (N=60)

| The difference of body temperature | Radiant warmer | | skin to skin | | t | p |
|---|----------------|------|--------------|------|--------|------|
| | Mean change | SD | Mean change | SD | | |
| Between 1 min – 30 min experiment | 0.38 | 0.29 | 0.08 | 0.24 | 4.316 | .000 |
| Between 1 min – 60 min experiment | 0.02 | 0.33 | -0.02 | 0.26 | 0.610 | .544 |
| Between 1 min – 30 min after experiment | -0.11 | 0.29 | -0.11 | 0.31 | -0.430 | .966 |
| Between 1 min – 60 min after experiment | -0.09 | 0.27 | -0.18 | 0.29 | 1.219 | .228 |

*p <.01

Table 3: Oxygen Saturation Between Radiant Warmer and Skin to Skin Contact (N=60)

| Oxygen Saturation (%) | Radiant Warmer | | Skin to Skin Contact | | t | p |
|-----------------------|----------------|------|----------------------|------|--------|------|
| | Mean | SD | Mean | SD | | |
| Before Experiment | 98.27 | 1.95 | 98.10 | 1.65 | .358 | .722 |
| Experiment | | | | | | |
| 30 Minute | 99.00 | 1.29 | 99.10 | 1.21 | -.310 | .758 |
| 60 Minute | 98.60 | 1.28 | 99.13 | 0.90 | -1.870 | .067 |
| After Experiment | | | | | | |
| 30 Minute | 98.93 | 1.11 | 99.17 | 1.05 | -.834 | .407 |
| 60 Minute | 99.10 | 1.07 | 99.13 | 1.07 | -.121 | .904 |

*p < .01

Conclusion

The study shown that the skin to skin maternal contact, under the blanket with a room temperature over 26 degree Celsius, could maintain body temperature and oxygen saturation of the newborns as well as the use of radiant warmer.