

The Comparison of Two Recovery Room Warming Methods for Hypothermia Patients Who Had Undergone Spinal Surgery

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A concise description of the paper

Having analyzed the article in question, it shall be stressed out that the article is of immense significance for both theoreticians and practitioners of nursing. The reviewed article is titled “The Comparison of Two Recovery Room Warming Methods for Hypothermia Patients Who Had Undergone Spinal Surgery”. The article is composed in full accordance with the existing medical in general and nursing practices in particular. The structure of the article is rather conventional in its nature, beginning with a detailed literature review, stratified by the parsed subject matters of the research. Then, conventionally the research methods, discussion section, results, and conclusions are outlined and analyzed respectively.

Purpose of the Paper

As far as the objective of this paper is concerned, the authors target the two most common patient warming methods and conclude on their efficacy and practical usability issues. The hypothermia affected patients have been designated as a research group, and the general aim of the project was to find out the time required to reach a specific temperature using two most popular warming methods – cotton-based blankets and radiant warmers. The research method involved the monitoring and analysis of the 130 patients diagnosed with hypothermia. The design of the method was primarily a quasi-experiment. The data collection procedure was exercised in the referral center, northern Taiwan. The overall goal of the project was to identify the most effective method to reach an internal body temperature since optimal body temperature is one of the most fundamentals of effective treatment procedures.



The credibility of the Authors

This article is considered a result of co-joint efforts of Hsiu-Ling Yang, Hsiu-Fang Lee, Tsung-Lane Chu, Yu-Yun Su, Lun-Hui Ho, and Jun-Yu Fan. The research team consists of a number of professionals, including Ph.D. degree research professors. The references utilized in the article are all credible and from well-reputed sources. The assumptions and the inferences made in the article do seem to be valid and academically sound since they are corroborated by the practice.

Variables

The research was focused on several important issues that are to be regarded separately. The first aspect to be considered by the research team is the thermoregulatory mechanisms biologically developed in order to retain the temperature that is physically required to support the life-cycling processes of a typical human being. The complications generated by the performed surgeries or other medical interventions of similar character are also mentioned in this section. However, a particular accent is laid on the hypothermia complications and the way they determine the temperature regime of the analyzed human being. The most popular warming devices used nowadays by the medical communities are radiant heaters and cotton blankets, the tools ubiquitously used by the medical staff in the different hospitals across the globe.

Hereby, following the assumptions outlined above, the analyst is expected to conclude that the variables of this cross-sectional, quasi-experimental study are the cotton blankets and radiant warmers applied to artificially increase the temperature level of the patients. In general, the research team analyzed the thermoregulatory conditions of 130 patients undergoing post-spinal surgery treatment. The division of the targeted groups was made on an equal basis, 65 being treated traditionally with radiant warmers and 65 with cotton blankets. The temperature was the determinant of the study and its vacillations were used to conclude on the efficacy of the partic-

ular warming method. It shall be considered as an invariable figure of the study in question.

Strengths of the Research

The research is of particular academic soundness due to multiple reasons, with the most important one being the overall character of the study, detailed analysis of the relevant research limitations and most importantly the temperature fixing and patients perception on thermal vacillations reaction.

First and foremost, the unanimous opinion of the contemporary medical communities is that there is definitely a crying need to find out the most effective warming method for patients who experience grave repercussions of the post-spinal surgery since the stabilization of the temperature regime is considered to be among the most essential conditions for a proper recuperation of the patient at issue. The medical scholars have expressed numerous convergent opinions that proper temperature regime, which is fully consistent with the normal temperature of an average human being (36 Celsius) is among the most positive conducive factors that condition the overall recuperation of the human being. Therefore, this very study is of particular importance due to the fact that it is practically relevant for the entire practical medical community. The task of proper temperature preservation and stabilization, thereof, is pertinent not after post-spinal surgeries exclusively, but it is equally relevant in the post-traumatic treatments of other physical or mental disorders of the inward patients of the medical facilities.

Secondly, the strong point of the paper is the detailed outline of the limitations thereof. In other words, the drafters of the paper have made a close accent on the criterion formulation of the discussed patients group. Moreover, the increased number of used criteria is globally considered positive in terms of academic sound-

ness and relevance. Five criteria have been devised by the analysts in order to select the examined group, therefore, it is reasonable to assume in this context that patients are in no way affected by other factors than the ones taken into consideration by the drafters of the article.

Thirdly, the evaluation method involved the use of highly sophisticated technological equipment which allowed measuring the temperature of patients with particular certainty and accuracy. Moreover, the use of the applied toolkits enabled the researchers to measure the temperature of the patients on the regular basis (every ten minutes) in order to identify the amplitude of the internal and external bodily vacillations of the discussed patients group. Considering the application of the technologically relevant tools, it can be reasonably assumed that the results obtained as a result of the study are valid, legitimate and academically sound.

Weaknesses of the Research

No matter how perfect the research method may seem, having made a practical evaluation of the article in question, one shall invariably reach the inferential conclusion that the targeted analyzed group represents only a small number of patients selected on the basis of particular criteria. Secondly, the research did not take into consideration collateral factors that may determine the side effects of the study as well and hereby the distortion of the ultimate results is highly possible in this context. Lastly, the article did not consider other heating methods that are becoming universally popular nowadays, and which can appear to be more effective than the two analyzed ones. Hereby, the results of the conducted research study are relevant and applicable for the health care units where more technologically updated heating facilities and tools are not available.

First and foremost, the patients used to test the efficacy and efficiency of the blankets and the heating techniques have been selected on the basis of definite and clearly formulated criterion. These criteria were both thermal and physical character. Moreover, the age particularities and time after the surgery was performed have been taken into consideration by the research team, as well. The patients tested for the analyzed internal and external body temperature stabilization have been subjected to general anesthesia, while the type of the anesthesia utilized was not taken into consideration, whereas abundant techniques thereof do exist and they vary greatly in their nature and scope. Hereby, the application of these warming methods after other tranquillization methods, local anesthesia, for instance, is challenged and contested by the medical communities.

Secondly, the collateral effects of treatment that may directly or indirectly affect the stabilization of the internal and external body regimes were not taken into account by the analytical team that completed the study on the basis of the conducted research. For instance, the internal body blood pressure and infectious contaminations of the patients have not been taken into account. More importantly, the diagnosed presence of other diseases, physical and mental deviations were not considered by the research team. Hereby, the collateral effects are omitted, and specific individual increase or decrease of temperatures of the patients can be attributed not to the general regularities of the analyzed trend (the efficacy of the warmer or efficacy of the blanket), but due to the individual peculiarities of the observed patient. The most important factor, that is to be considered, is the presence of a particular disease of a patient that was not analyzed before the test procedure was initiated. Although it does seem to be highly improbable practically, it is still highly possible that the internal body temperature of a particular patient can be increased due to the presence of parasites in his intestines, but not to the use of the discussed technological tools.

Thirdly, the tranquillization methods used by the research team in question are limited to the use of general anesthesia. The majority of surgical procedures is nowadays perpetrated with the use of other means of tranquillization, which completely excludes the use of anesthesia as a method to stabilize the condition of the patient before and after the surgery is perpetrated (Cooper, 2006).

Practical Evidence and Application

Having analyzed the state of contemporary medical practice, it can be reasonably concluded that nowadays the medical community is extensively employing the toolkits elaborated by the analytical team in question. Having proven that the blanket based heating techniques are considerably less effective than the heaters-based ones, the medical practitioners are nowadays demonstrating the recurrence to the use of artificial warming technologies. Nowadays, the vast majority of the United States clinical healthcare departments have installed similar warming technologies to rewarm their patients and to carry out the treatment procedures accordingly. 71% of the European clinical healthcare units have established their rewarming practices in accordance with the findings of the article in question.

Conclusion

The findings of the reviewed article clearly suggest several important conclusions of inferential nature. First and foremost, the findings of the article are indeed practically substantiated, academically sound and relevant for the needs of the modern medical practice. The research methods and research criteria have been formulated in full consistence with the existing standards of contemporary medical practice. Hereby, the practical medical relevance and importance for the needs of the medical community are indeed undisputed as the use of proper rewarming method sig-

nificantly facilitates the general recuperation and treatment procedures of the patients (Wierich, 2008).

However, the study contains a number of limitations, as well. Most importantly, it does not take into consideration other popular patients rewarming techniques and the small number of the targeted patient's conditions the limited character of the study. The practice in its turn indicates the use of the heaters in question has assumed global recognition and, therefore, the assumptions of the study have been fully substantiated.

