
ICU Volume 6 - Issue 4 - Winter 2006/2007 - Cover Story: Hypothermia in Care

Use of Induced Hypothermia: Acceptance and Implementation Issues

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In this article, Professor Girbes discusses the difficulties a manager may face when introducing the practice of therapeutic hypothermia into the intensive care unit (ICU), as well as the best techniques for overcoming these obstacles. The change management techniques he recommends may help smooth the transition and ensure successful implementation.

Introduction

Induced hypothermia can now be considered a lifesaving and neurological outcome-improving intervention. According to evidence-based medicine (EBM), this therapy must be applied after cardiopulmonary resuscitation (CPR). Induced hypothermia is also indicated for patients experiencing increased intracranial pressure (ICP) after traumatic brain injury, as a means of decreasing ICP. More indications are under investigation, and the reader is encouraged to learn more in recent reviews, such as those published by Oddo et al. and Dr. Kees Polderman (see table 1).

Despite these studies showing significant therapeutic benefits, induced hypothermia is still a relatively new therapeutic strategy, and many hospitals and intensive care units (ICUs) might not be familiar with the rapid and successful induction of hypothermia. Thus, in order to encourage effective implementation of the therapy, awareness of the therapy must be raised among healthcare professionals. Additionally, the long-standing, relatively passive attitude of healthcare workers towards post-resuscitation patients must be altered, since induced hypothermia requires a very active "*surveillance armée*" not only to apply hypothermia rapidly and successfully, but also to prevent potentially dangerous side effects, which might undo the therapy's beneficial effects. Because changing the behavior of healthcare workers, including physicians, is well known to be very difficult, great leadership skills are required to introduce such a new strategy successfully.

Barriers for Implementation

The so-called "Don Corleone" policy implementation method, in which the leadership, drawing upon their authority, present the available literature to the team, together with the small but urgent message to implement is doomed to failure, at least in the long term. Introduction of a new therapy, especially if it demands more efforts on the part of the staff, requires a careful plan that includes education, motivation and support of the team. Additionally, it is my conviction that the ownership of such a new strategy should be given to (members of) the team. This will be discussed later.

As a rule, doctors, scientists and department heads are very good at rational reasoning. When implementing a new hypothermia policy, however, one should not forget that non-rational arguments can play an important role in the behavior of these medical professionals. Staff should be reassured that the introduction of a new and better method does not mean that they previously did a lousy job, in order to ease the staff's concerns about the change. However, changing the old behavior of doctors has proven to be extremely difficult, and patience is a virtue that is relatively rare in (ICU) doctors. Even if the evidence supporting change is strong, as is the case for induced hypothermia, well-established patterns are difficult to alter if the working environment is not conducive to change.

Examples of barriers to implementation of an evidence-based practice, such as induced hypothermia, include:

- An unfavorable organizational context. For example, if a treatment is not reimbursed or there is a clear lack of time, it may be impractical to implement the new procedure.
- An inhibitive social context. So-called opinion leaders may play an important role in this context. If they fail to appreciate the evidence, other team members may, as well.

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- An unprepared clinical context. Clinical uncertainty and a lack of specific skills may further impede implementation.

Acknowledgement of all these factors is the beginning of a successful route to implementation.

The Example of Hypothermia

A brief consideration of change management for therapeutic hypothermia practices may illuminate some of the difficulties that leadership may encounter when introducing therapeutic hypothermia in the ICU. We can mirror this to the practice of hand-washing, which has a proved, major impact on hospital-acquired infections: despite all the evidence pointing to the role of hand-washing in preventing the spread of infection, the compliance of healthcare workers, especially doctors, is very poor.

Difficulties in the process of successfully introducing therapeutic hypothermia can be anticipated at varying levels:

- At an individual level (“I never saw any improvement in neurological outcome” - “I think there is a lack of hard evidence” - “The machine makes too much noise” - “I have no time for all the extra work”);
- At the level of the team or unit (“Nobody controls the correct application” - “The leadership is not interested”); and
- At the level of the hospital (“It is not feasible” - “No hospital guidelines exist” - “No facilities are available”).

Consequently, because barriers to change exist at various levels, it is important to develop and implement an induced hypothermia policy in a manner that addresses each of these possible stumbling blocks.

Strategies for Implementation

The supply of clear information is of the utmost importance. Such information may include educational materials, educational outreach visits, (small) conferences and interactive small-group meetings. Information transmitted by a so-called opinion leader may also contribute. Some managers tend to believe that, if the desired goals have not been achieved, giving more and more information will settle the problem, bringing achievement of the desired goal closer. However, giving information is only one aspect of a strategy for successful implementation, and it is, in general, not successful as a single intervention.

Other, more successful strategies include feedback on performance, reminders, computerized decision support (such as patient data management systems, or PDMS, in the ICU), mass media campaigns and financial interventions. Since physicians are an especially difficult target group to change long-standing, established patterns of acting, other professionals can be called in to help stimulate change. Therefore, substitution of tasks, e.g. by physician assistants or nurse practitioners, may be helpful. The highest success rate, however, is probably achieved by a combination of many of these interventions.

A Case for Giving Away Ownership

An implementation strategy for the leadership that should not, in my view, be overlooked is giving ownership of the transition to a dedicated group in the team. The most important contribution of the leadership is:

- To identify members of the team who are (potentially) motivated; and
- To be willing to “give away” the honor of a successful new treatment (and its implementation) to others.

For a hypothermia project, this might mean that you ask a group of nurses and doctors to assess the value of hypothermia and – if deemed useful by them – to implement this therapy. It is important to involve “key-persons” of the ICU team in such a group, and they should be given clear responsibilities. The leadership should then give positive feedback frequently when this group makes any progress. Feedback can also be given in the form of data on the effectiveness of an intervention. For example, giving feedback on the (improved) results of survival of resuscitated patients may well continue to motivate the team, partly because the merits of this result are attributed to those who introduced a new strategy, i.e. the team members themselves.

Conclusion

Introduction of a new treatment or therapeutic strategy, such as induced hypothermia, requires a careful plan. Providing information and education alone are surely not enough to successfully implement such a change. However, several tools are at our disposal and can be used to make implementation a victorious event.

Published on : Thu, 15 Aug 2013

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