SPECIAL ARTICLE

Termination of ventilatory support of a patient under compulsion, who is not yet brain dead

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SUMMARY

Clinicians are more comfortable psychologically in withholding a treatment than withdrawing it. Reasons for this are related to the fact that withholding is passive, whereas withdrawing is active and associated with a greater sense of moral responsibility. Withdrawing or terminating ventilation in Intensive Care Unit (ICU), even in a terminally sick patient, needs thoughtful review, particularly in those patients who are not yet brain dead. So many arguments may be offered against termination of ventilatory support. Ventilation is a part of palliative care which is always instituted to improve the quality of life and to relieve physical as well as psychosocial problems. Age is a very important factor as younger patients have a greater chance to improve than elderly, if the brain is not yet dead. Even during end of life care, not only ventilation is continued, but antibiotics, nutrition and care of bed-sores etc is also continued. As far as moral principles are concerned, termination of ventilation or withholding it, are equivalent in terms of medical ethics. Dignity of dying is as vital and important as dignity of living. One can always justify continuation of ventilation on ethical grounds. There is clinical precedence for this practice.

In the opinion of the Supreme Court, withdrawing of life support should be considered synonymous as a kind of euthanasia. So, the termination of ventilation under compulsion would stand illegal and unlawful. Discontinuation of ventilation on economic reasons must be considered immoral and irrational. Sometimes the decision of terminating ventilatory support may be taken in the absence of interdisciplinary communication or that with the family of the patient. Many religious beliefs argue against the termination of ventilation. There are some religious groups who even challenge the existing brain death criteria.

I would suggest that all these factors should be considered before taking the decision to terminate the ventilatory support under compulsion in a terminally sick patient, whose is not yet brain dead.

Key words: Brain death; Brain death criteria; Ventilatory support; Critical Care Units

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Advances in technology and development of modern gadgets have made long term survival possible for the patients in Critical Care Units.[1,2] But the debate remains regarding recommendations of end-of-life procedures, such as, terminating the ventilatory support. There are scores of concensus-meetings, unanimities and guiding principles in the literature that may help taking decision in this vital subject.[3-5] The patients on ventilatory support with no brain death may be suffering from end-stage malignancies, nonmalignant end-stage diseases of different organ systems and patients with quadriplegia. Such patients may be in reversible coma or other critical conditions that may or may not be retrievable.[6-8]

There are various factors that play a crucial role in decision making, e.g. opinion of the physicians and that of relatives of the patient or the patient himself. The opinion to terminate the ventilatory support may be influenced by the religious faith, traditions and ethnicity of a particular nation. Though the incidence of decision making to terminate the life-supporting procedures is on the rise in recent years, it cannot be justified morally or ethically; since a commercial angle has been playing in these as a major factor. The decision makers give more weightage to cost-benefit aspect which is not always the correct approach.

Palliative care: The patients may be on ventilator

to improve the quality of life that involves various disciplines of medical practice.[9,10] It may relieve physical symptoms as well as reduce psychosocial problems. Ventilation may be a part of palliative care.

The age factor: There is a sequential relationship between age and disease.[11] There is increased incidence of diseases in the elderly due to age-related physiological changes. There are more chances of retrieval in younger patients. The basic principles of managing chronic progressive disease in old age are usually quite different from that in younger patients. In both medical and surgical fields, it is difficult to diagnose and treat the elderly patients. In the end-stage phase, this problem increases manifolds. So, age is also a factor before terminating the ventilatory support.

End of life care: Principally, End of Life Care means the care of a dying patient. It is not only intended to manage the symptoms but provides psychological support as well. The invasive procedures and aggressive management are either not initiated or are withdrawn. So, End of Life Care is provided to patients with end stage disease, in the absence of reversible factor, after failure of all forms of treatment, written consent of patient and relatives and explanation of issues of benefit and burden.[12,13] Termination of ventilation should not be done in case there are even minimal chances of reversibility of complication or exacerbation of the disease. In addition to continuation of ventilation, routine antibiotics, care of bed sores and procedures such as incision-drainage of pus collection must be carried out.

Moral principles: Since time immemorial, moral codes have been followed in medical care of patients.[14,15] The implementation and acceptance of these principles may vary in various countries and cultures.[16,17] Family and social traditions also play a role. The termination of ventilation under compulsion would amount to euthanasia which is not permissible in all the countries. However, if the disease is irreversible and end-stage the patient and relatives may refuse the aggressive treatment and invasive procedures. The physicians have the moral duty to keep the patient comfortable. The termination of ventilation or withholding it, are equivalent in terms of medical ethics. Dignity of death is as important as the dignity of living.

Religious factors: Religion is an important determinant of attitudes toward dying, death, and end-of-life care. Basically, there is no controversy in relation to end of the earthly life in various religions. More or less all religions maintain the sanctity of the dying and of the death and discussion of religious and spiritual issues should not be ignored. In Islam, atmosphere of divinity around dying patient, recitation of holy verses and performance of last rites and rituals are highly valued.[18] In Hindu faith, it is significant to die a peaceful death to attain 'Mukti' i.e. liberation from life-death cycle. In practice, these values get violated in a dying patient in hospital. In orthodox Jews, law allows life-sustaining treatments to be withheld, but withdrawal of continuous interventions is forbidden because it is regarded as an act to shorten life. In general, it is believed by all religions that if you cannot give life, you have no right to take it away. So, the termination of ventilation under compulsion, particularly in the absence of brain death, is not at all permissible as per religious point of view.

Legal aspects and end of life: Care of patients with end stage disease involves difficult medical decisions. To avoid the dilemmas of such decisions, physicians take the help of the court for its directions and guidance. To prevent the medical misconduct in healthcare practice, there are various legal issues invoved.[19-21] Physicians must follow accepted ethics and professional guidelines in order to take appropriate medical decisions. Although, each patient is individual and different, the management is based upon similar principles. The termination of ventilation under compulsion does not have legal support in most of the countries, but laws may vary from country to country.

Ethical principles of continuing ventilation: The ethical principles dictate that first of all we must act in the interest of the patient. In the ICU care, however, life support may be manipulated in many ways that may not be, strictly speaking, in the interest of the patient. This is seen during the family's adjustment phase of understanding the disease and accepting the terminal phase of illness. There may be some conflict or disagreement with the recommendations of the ICU team. This may be under the guise of acting in the interest of the patient but is, in reality, acting in the emotional interests of the family. There are compassionate reasons to extend ventilation, e.g. in wait for some family members to arrive from overseas, or not to let the patient die on a special day (Christmas or a birthday).

One can ethically justify extension of ventilation. There is clinical precedence for this practice.

A majority of Canadian intensivists are in favour of extending ventilation for organ donation. In response to the survey question 'in the setting of acute brain injury, would you extend the duration of ventilatory support for brain death to potentially occur', 68% of respondents replied yes.[22]

Personal choice regarding care: Though existing laws in the current era lay stress on individual choice to decide the type of care, it is important to emphasise that the patient and the relatives must be aware of the nature, course, complications and the prognosis of the disease before they force the physicians to terminate the ventilation. It is rather strange that consent is required

to start a therapy but not for withholding. For instance, a surgery cannot be performed without an informed consent, but postoperative ventilation can be started and maintained without it. The relatives who want the termination of ventilation may argue that they did not give consent for prolonged continued ventilation and thus it should be terminated. In such situation, the law of the land would prevail based on the various factors, especially the factor of brain death.

Ventilatory life support and legal issues: In the end-stage phase, ventilatory support itself leads to distress and despondency, particularly if the patient is not unconscious. Invariably, it is impossible to wean the patient off the ventilator in the terminal stages of disease. Both withdrawal and continuation of ventilation are, of course, medical decisions. Usually, there should be no medical or legal hassle in withdrawing the ventilatory support if the patient's condition is irretrievable.[23] It may be argued that if assisted ventilation has not been proved to be productive and beneficial to the patient, it should be discontinued. But if the brain is not yet dead, legal troubles may ensue.

The guidelines regarding withdrawal of life support have been issued by the author's institute,[24] but their application has to be governed in accordance with decision of Supreme Court of India.[25] In the opinion of the Supreme Court, withdrawal of life support should be considered synonymous with a kind of euthanasia. So, the termination of ventilation under compulsion would stand illegal and unlawful.

Economic Considerations: The issue of cost involved in continuing the ventilatory support is usually considered immoral and irrational. It is true that the cost of critical care is high and that it may have to be continued for many weeks to months, ethical issues of critical care cannot be dismissed purely on the ground of emotional justification. Although in the USA, medical bills contribute to about 50% of bankruptcies; termination of ventilation in a patient with brain not yet dead, would not be justified on economic grounds.

Interdisciplinary communication: Ventilatory care in most ICUs is provided by an

multidisciplinary team that includes nurses and physicians of different specialties. The decision to terminate the ventilation should be made after discussions between all members of the team. But the collaboration in between the team members varies in different countries. Poor interdisciplinary collaboration may result in features of burnout, depression, and post-traumatic stress among ICU personnel. Moreover, disagreements between physicians in the ICU are frequent regarding end of life care such as the decision regarding termination of ventilation.[26]

Communication with family: The physicians treating a critically sick patient must reveal the information about the condition and prognosis to the patient and the family members to help them decide the treatment preferences. A 'shared decision' means that 'the responsibility for decisions is shared jointly by the physician and the patient's family'.[27] But significant differences are there in the extent of involvement of the patient and the family in the termination of ventilation. In Asia, family involvement may be even 100% in decision making.[28] Most families prefer the physician to recommend about termination of ventilation in Europe.[29] But in few isolated instances, physician is under compulsion by the family to terminate the ventilatory support. Physicians must consider the variety of attitudes present in the multicultural society in the modern era. Only half of the families can understand basic information about diagnoses, prognoses or treatment options after discussion with the physicians.[30]

Brain Death Determination: Brain death is defined as the irreversible loss of function of the brain, including the brainstem. Primary cause of brain death may be head injury or intracranial hemorrhage, while in Medical or Surgical ICU, hypoxic brain damage is the major cause. Before discontinuing the cardiorespiratory support the criteria for brain death must be fulfilled.

There are various steps to reach the determination of brain death.

Step 1. Establish cause of coma and irreversibility of coma.

Step 2. Document clinical assessment of brain stem reflexes.

Step 3. Perform and document apnea test.

Step 4. Perform ancillary testing, if indicated.

Step 5. Implement religious or moral objections to brain death standards.

Step 6. Certify brain death.

Step 7. Discontinue cardiorespiratory support.

Brain death for the purposes of organ donation: Extending ventilation to allow brain death to occur for the purposes of organ donation is practiced, particularly if expressed wishes of the patient are known.[31] Donation decisions depend on attitude toward donation and the religious, cultural, and knowledge-based beliefs that comprise the attitude.

"Brain Death" is not Death: 'Pontifical Academy of Sciences' hosted a meeting in 2005 at the Vatican entitled "The Signs of Death." The meeting was convened at the request of Pope John Paul II to reassess the signs of death and verify at a purely scientific level, the validity of brain-related criteria for death. They concluded, "When a vital

organ ceases to function, death can result. On the other hand, medical intervention can sometimes restore the function of the damaged organ, or medical devices (such as pacemakers and heart-lung machines) can preserve life. The observation of a cessation of functioning of the brain does not in itself indicate destruction of brain, much less death of the person. There is overwhelming medical and scientific evidence that the complete and irreversible cessation of all brain activity (in the cerebrum, cerebellum and brain stem) is not proof of death. The complete cessation of brain activity cannot be adequately assessed. Irreversibility is a prognosis, not a medically observable fact. We now successfully treat many patients who in the recent past were considered hopeless."

Such concepts, though sponsored by religious bodies, also suggest that termination of ventilation in end stage patients should not be undertaken even when physicians are under compulsion.

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