Mechanical ventilation in the home

The role of the psychiatrist[1]

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Mechanical ventilation in the home is preferable to hospitalization for economic and psychosocial reasons. The psychiatrist can aid in the assessment of home care candidates in three specific areas: (*a*) organic impairment of brain function by the primary disease or its treatment, (*b*) the patient's reaction to the illness, including premorbid adaptive and maladaptive coping behavior, and (*c*) mood disturbances. Rehabilitative care is directed toward patient participation and partial weaning from the ventilator. Custodial care is intended for those patients who cannot be weaned and whose condition does not allow them to help care for themselves.

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Mechanically supported respiration is not a new form of home care. In 1939, Smith[1] described a 21-year-old man with polio who had required mechanical ventilatory assistance for eight years, both at night and during superimposed acute illness. The epidemic of polio in Los Angeles in 1948–1949 resulted in large-scale use of mechanical support devices.[2] At a symposium held at The Cleveland Clinic Foundation (CCF) in 1984, Dr. D. Armin Fischer described large, gymnasium-like wards at Rancho Los Amigos Hospital, with scores of patients in tank respirators. In England, ventilator-dependent patients who live at home are called "responauts." Geoffrey T. Spencer, an anesthesiologist, organized a team approach in 1965 to assist patients and family members to cope with the stresses of the illness and home care.[3] The purpose of this paper is to

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give a brief overview of the psychological aspects of ventilator dependency and comment upon the role of the psychiatrist in assessment and support for the patient and his or her family. More detailed reports of this approach at the CCF have appeared elsewhere.[4-6]

Rehabilitative and custodial care

At the CCF, patients who become ventilator-dependent are evaluated to ascertain whether they qualify for custodial or rehabilitative care. Patients categorized as needing custodial care are assumed to be irreversibly ventilator-dependent; they are not expected to participate in their own care, and even partial weaning from the respirator is not feasible. On the other hand, the goal of rehabilitative care is for at least partial weaning and patient participation in self-care, thereby leading to some hope of improved function. The treatment team tries to make the patient comfortable at home, with the expectation that the patient and family will be able to resolve the inevitable conflicts associated with permanent impairment. Attainment of maximum physical comfort and emotional stability for the family as well as the patient is brought about primarily by intensive educational sessions with the respiratory therapist and nurses and by supportive sessions with the psychiatrist which are intended to facilitate the communication of thoughts and feelings.

Psychiatric consultation

Ventilator-dependent patients who are being considered for home care are seen by the psychiatrist as soon as they have been stabilized if onset of illness was acute. Occasionally the patient will have undergone psychiatric consultation in the intensive care unit because of anxiety, depression, or delirium prior to consideration for home care, or consultation may have been requested during efforts to wean the patient from the ventilator. Three specific areas are explored by the psychiatrist.

1. *Brain function and possible underlying organic impairment.* Regardless of the reason for requesting psychiatric consultation, mental status must be determined in order to ascertain whether or not the primary illness has affected brain function. Treatment of the underlying illness could also have an effect on the central nervous system (CNS). The first consideration is whether the patient has a clear sensorium, or whether there are subtle (or occasionally not so subtle) changes suggesting impairment of CNS function. Delirium may be the result of the primary illness, the medications used to treat the illness, or even sedatives and hypnotic drugs used to alleviate anxiety and sleeplessness resulting from the illness. It is unreasonable to expect a patient with subtle organic brain impairment to be able to comprehend his or her treatment sufficiently to participate in self-care; for example, teaching the patient to do his or her own tracheal suctioning before a mirror requires intact cognition, attention span, and eye-hand coordination.

2. *Patient's reaction to the illness.* The psychiatrist needs to find out what kind of person the patient is, including his or her premorbid coping style. Of equal importance is an understanding of what the illness means to the patient: how is this person attempting to integrate the illness into a concept of himself or herself, family, work, or even beliefs? In evaluating premorbid coping behavior, it is best to assume that people are motivated by the desire to be well, which gives rise to an almost universal attitude of denial. Physical deviations from normal tend to be disregarded by most people. However, the extremes of stoicism and denial, while serving to minimize the disastrous effects of some disorders, may contribute tragically to delay and lead to noncompliance. Chronically ill patients respond to stress in a variety of ways. Neither the illness which leads to ventilator dependency nor the dependency itself is associated with any distinctive personality traits or coping style to our knowledge, so that each patient is unique in this regard. Past behavior under stressful circumstances can be used to predict present and future behavior under conditions of equal or greater stress. The purpose of such psychological adjustments or defenses is to minimize the uncomfortable affects or feelings generated by the process. Some of these defenses will be adaptive and some maladaptive. A certain element of denial may well be necessary for survival. For instance, denial of the serious implications of the illness may help a patient maintain hope and avoid serious and incapacitating despair. Any mental activity that supports hope for improved quality of life promotes a more comfortable mental equilibrium; for many people, strong religious beliefs may serve this purpose, while others tend to impart to their physicians almost magical power over their lives in an effort to support hope for improvement.

3. *Mood disturbances.* The psychiatrist must

also determine the mood of the patient, in particular seeking signs of depression, inappropriate affect, flooding of affect with lability, or absence of any outward affect. If depression is present, it is necessary to determine whether it is simply a reaction to the illness or part of a larger affective syndrome which carries a more grave prognosis. One must always be alert to the possibility that the illness has somehow caused a previously latent psychiatric disorder to become manifest or aggravated a pre-existing disorder.

Family issues

The family is also interviewed as part of the psychiatric assessment. Input about the patient is needed for verification of impressions. More importantly, the capacity to cope with custodial or rehabilitative care must be evaluated. In addition, any pre-existing family conflict must be known, because experience has shown that after the initial rallying around the ill member during the early stages of ventilator dependency, old issues can resurface with even greater intensity. Long-standing negative feelings held by the well spouse which have not been intrusive as long as the ill spouse was healthy and independent may become overwhelming when dependency develops due to chronic illness. Role reversals in caretaking may create mutual anxiety and hostility in the patient and family members. I have seen several instances where this hostility was displaced by the patient and/or family and projected onto the treatment team. This situation can result in mutual distrust unless it is recognized for what it is, i.e., a psychological defense mechanism. In such situations, it has been helpful to have a psychiatrist address the feelings of all three parties (patient, family, and staff).

Conclusion

It is important that those involved in caring for machine-dependent patients recognize that these patients need our support as much as they need life-sustaining procedures. Such individuals' needs and comfort are every bit as important as technology. Given a good team effort, the needs of these patients and their families can be adequately addressed. The psychiatrist can help the patient adjust to chronic machine dependency and can also support dedicated team members who exhibit "burn-out" while striving to provide the best chance of survival for these chronically ill patients.

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