any segment of the population endangers every member of society. If TB is to be eradicated, special attention must be given to this segment of society in which both the prevalence and incidence of infection are still excessively high. For many countries, the alternative is bleak: a dreadful situation will become even worse.\textsuperscript{15}

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\textbf{Should Patients With Neuromuscular Disease Be Denied the Choice of the Treatment of Mechanical Ventilation?}

Duchenne’s muscular dystrophy (DMD) is an X-linked recessive disorder of male subjects occurring in 30 per 100,000 patients. DMD is present at birth and manifests initially between the ages of 3 to 5 years. The patients are usually wheelchair bound by the age of 12 years. This occurs because of muscle weakness, contractures, and progressive significant scoliosis decreasing pulmonary function. Although these patients may develop cardiomyopathies, they usually die between the ages of 16 to 18 years of pulmonary failure from the complications of diaphragmatic weakness and chest deformities. Other causes of death are aspiration of food and acute gastric dilatation.\textsuperscript{1}

Recent advances in technology and familiarity with older techniques have given new hope to many patients with DMD, postpolio syndrome, and amyotrophic lateral sclerosis (ALS).\textsuperscript{2} These techniques have systematically decreased morbidity, mortality, and hospital stay.\textsuperscript{2}

What can be done for neuromuscular disease? Patients with neuromuscular diseases are at risk for atelectasis, aspiration pneumonia, and respiratory failure. Education of the patient, family, and caregivers is an important cornerstone in the overall treatment of DMD and has already been shown to help significantly in patients with ALS.\textsuperscript{3} This includes teaching caregivers simple respiratory therapy using home suction equipment. Physical therapy, administered primarily by the caregiver, increases lung recruitment, and assists coughing and sputum mobilization. Oxygen can be made available at home, although this may cause respiratory depression in some patients.\textsuperscript{2,3} The inclusion of early hands-on patient education for ventilation is now thought also to be a vital part of the overall educational process.\textsuperscript{4}

The cause of death in DMD is respiratory failure. Palliative treatment for DMD toward the end of the course of the disease is effective and includes pharmaceutical treatment using opiates, benzodiazepines, phenothiazines, and anticholinergics. Re-
cently, mouth or nose noninvasive positive-pressure ventilation (MNNIPPV) has been used for postpolio syndrome and DMD. In DMD, matters are complicated by the fact that many patients are not fully adult, and may deteriorate in lung function at the onset of MNNIPPV. FVC was found to be lower over a 2-year period when DMD patients use MNNIPPV, compared to the postpolio syndrome. Even so, early invasive ventilation for DMD is not necessarily the best initial ventilatory option. When MNNIPPV fails, invasive mechanical ventilation (MV) is eventually imperative to prolong life. Negative-pressure ventilation is an option, but positive-pressure ventilation is the better mode of ventilation at this stage. As soon as a tracheotomy is placed, the patient can receive ventilation at home. Speaking and eating are possible with tracheotomy, and the quality of life can be acceptable.

Should you tell them early? Most patients who are told early about ventilation as an option elect to take this option when the time comes and do not change their minds. If told later, they may elect not to receive ventilation. Another reason to approach the subject early is that the intellect of patients with DMD is less than their peers and may deteriorate in the late teens. Most authorities believe early and repeated education about the disease, including ventilation, is the correct way to manage these patients.

In this issue of CHEST (see page 940), Gibson reports the astonishing results of a survey sent to physicians who treat neuromuscular diseases in Canada. She found that 22.7% of physicians sometimes disclosed the treatment option of MV and 2.3% never disclosed this option. In addition, of those physicians who did discuss the option of MV, only 57.1% were "impartial." The reasons for not recommending MV were a poor quality of life, lack of financial resources, and inadequate home environment and support.

From an ethics point-of-view, the driving consideration should be the best medical interests of patients. This would, at a minimum, include informing them of all of the available options for treatment. In DMD, matters are complicated by the fact that many patients are not fully adult, and may experience a decrease in mental ability that comes with disease progression. This means that the issue of decisional capacity will need close attention. However, in cases of informing patients early, before they begin to lose capacity, or in later cases where capacity is lost, the parents will need to be involved in the decision-making process. All of this requires time and effort, but it is vital if patients are to be treated properly.

In the current study, Gibson found that many physicians are not consistently and impartially discussing the full range of options with DMD patients. They are instead making value judgments that they implement through simple nondisclosure or through discussions that are negatively framed toward intervention. While there is debate about the role of physician recommendations for either treatment or nontreatment, any recommendation that is made should be in the context of a full and balanced disclosure of viable treatment options, with the ultimate decision resting with the patient and/or family. While it is encouraging that the results of the current study are better than those of an earlier study in America, clearly there is still much education to be done.

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