Table 1. Test Method for Determining the Laser Resistance of the Shaft of Tracheal Tubes

<table>
<thead>
<tr>
<th>Laser Duration (s)</th>
<th>No Damage to Cuff Inflation System</th>
<th>No Damage to Tracheal Tube Shaft</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>30</td>
<td>5</td>
<td>19</td>
</tr>
</tbody>
</table>

These test conditions did not damage the cuff inflation system or the shaft of the Mallinckrodt Laser-Flex tracheal tube.

ASTM test conditions:
- 98% O₂ environment, 1 l/min flow.
- Carbon dioxide laser: Sharplan Laser, Stationary 0.49-mm laser spot diameter.
- Continuous-wave laser beam held perpendicular to the tracheal tube.
- 20 Laser Flex tracheal tubes tested: five for each test condition.
- Lowest power level delivered at the tube surface before damage occurred for each duration.

Work is underway by the International Organization for Standardization committees in Anesthesiology and Electro-Optics. ||

We used these new test methods to identify safe laser power levels with the Laser-Flex tracheal tube. The test results support the conclusion that the tube is not damaged by laser power levels used in typical clinical situations (table 1). However, tests show that high power levels or long exposures to continuous laser energy will damage the cuff inflation lines inside the tracheal tube and ultimately perforate and burn the stainless steel tube.

Complaints of potential damage to the Laser-Flex tracheal tube are rarely reported; 15 complaints involving the cuff inflation system have been reported to Mallinckrodt in the last 5 yr. On examination, only one of these complaints was confirmed to have a melted cuff inflation line inside the tracheal tube.

In the cases of difficult extubation reported by Heyman et al., lasers were reported to contact the shaft of the tube for more than 45 s. Though physical damage was not directly confirmed in these case reports, it is likely that long exposures may have led to occlusion of the cuff inflation lines.

It is important that anesthesiologists are aware of power and duration settings of lasers used during surgery on the upper airway. Damage to the tracheal tube may result if power levels approach or exceed the maximum safe levels listed above.

If difficult extubation is traced to a nondeletable cuff, it may be necessary to pierce both saline-filled cuffs with a sharp instrument, such as a spinal needle, to ease extubation.

The information herein will be added to updated Laser-Flex product labeling and literature when standardized AST labeling guidelines are adopted in the near future.

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(Accepted for publication October 4, 1993.)

Abortion Does Not Lead to Euthanasia

To the Editor:—Barnette and Wendling warn that the "devaluation of human life" is inherent in any physician-assisted death. They imply that the legalization of abortion constituted such a devaluation, and began a "progression of thought" that led to society's contemplation of euthanasia. Finally, they suggest that further logical progression may lead to the mandation of euthanasia by the state.

I agree that the value of life is at issue in every euthanasia proposal, and that we must guard against taking it cavalierly—perhaps to the extent that we refuse to institutionalize euthanasia under any circumstances. However, I believe that the authors' statements about abortion and about progression to state-mandated killing are illogical and therefore dangerous, constituting an unsubstanimated attack on abortion in the name of Hippocrates.

The authors state that "the defining issue is not the distinction between state and individual autonomy but the devaluation of human life and the inevitable progression of thought and act that results from acceptance of that concept." They then cite Roe v. Wade as an example of the devaluation of human life, without a word to suggest it might be otherwise: "Following Roe v. Wade, concern was expressed regarding the inevitable progression from the legalization of abortion to euthanasia . . . a scant 20 yr later, we are discussing the likelihood of legalized euthanasia in America. Clearly, such a progression of thought did occur."

When did abortion become a self-evident example of the devaluation of human life? And how does the fact that abortion was legalized 20 yr ago prove a "progression" to current discussions of...
CORRESPONDENCE

euthanasia? I believe Barnette and Wendling have used an undefended assumption and drawn an illogical conclusion. The combination allows them to condemn the Roe v. Wade decision for making euthanasia a possibility.

In discussing euthanasia, the authors make a compelling final point: If we physicians come to see death as an acceptable “treatment” for intractable situations, we ultimately might make the leap to prescribing it for patients who cannot speak for themselves, and we might get the state (court orders) to help us. (This suggests that the distinction between state and individual autonomy is a defining issue, contrary to the authors’ statement quoted above.) In any case, I agree with Barnette and Wendling that physician- or state-mandated killing must not happen. The very seriousness of this risk obliges us to be extremely careful whom we blame for it. Let us not drop the blame on Roe v. Wade. Our efforts to help our patients should not create more innocent victims.

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Reference

ANESTHESIOLOGY 79:402, 1993

(Accepted for publication October 5, 1993.)

Anesthesiology 80:239, 1994
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J. B. Lippincott Company, Philadelphia

In Reply—The purpose of our letter was to share our concern regarding the fairly recent association of anesthesiologists with euthanasia. We did not make any statement regarding Roe v. Wade to support or condemn abortion but simply to point out that changes in medical ethics and the legality of medical practice may lead to a progression of thought and action largely unanticipated. Former Chief Justice Warren Burger agreed that the actions of the court might lead to unforeseen consequences when he wrote (in an obscenity case 6 months after Roe):

The seductive plausibility of single steps in a chain of evolutionary development of a legal rule is often not perceived until a third, fourth, or fifth “logical” extension occurs. Each step, when taken, appeared a reasonable step in relation to that which preceded it, although the aggregate or end result is one that would never have been seriously considered in the first instance."

In regard to Doering’s claim that “the author’s statements about abortion and about progression to state-mandated killing are illogical and therefore dangerous,” we wish to point out that illogical thought is not always dangerous, just as logical thought may be quite dangerous. Additionally, although our intent was not to discuss abortion, it must be noted that the court held that aliveness was separate from personhood in regard to fetal life. Without having made that separation, legalization of abortion would not have been possible under the 14th amendment to the constitution. The abortion issue, at the time of Roe v. Wade, raised concern regarding a progression to euthanasia. We referenced these points in our original letter. The issue was discussed widely; indeed, a physician from Doering’s institution was quite prominent in that discussion."

Our quotation from the Hippocratic oath dealt specifically with the issue of euthanasia. Doering should be reminded that, even in Hippocrates’ day, there was disagreement regarding euthanasia and abortion. If there were not, he would not have believed it necessary to include the following in his famous oath, “I will give no deadly medicine to anyone if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion.”

We continue to believe that the primary issue in ethical discussions regarding euthanasia is that of the sanctity of human life, rather than the distinction between state and individual autonomy. Once that previously inviolable tenet is discarded within a society, a progression is begun that is difficult to fully envision or halt.

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ANESTHESIOLOGY 78:353–360, 1993


(Accepted for publication October 5, 1993.)