Leaking Endotracheal Tube

To the Editor:

Leaking endotracheal tube cuffs are common problems in intensive care units. Repairing the leak is preferable to reintubation when patients have difficult airways, are hemodynamically unstable, or have been receiving high levels of PEEP. Although endotracheal tube cuff leaks may result from a ruptured cuff balloon, the more common cause is an incompetent pilot balloon valve. Boussard et al. have recommended a continuous infusion of air through a circuit consisting of a manual pressure valve and flexible tubing to treat endotracheal tube leaks, but this requires material not readily available in the ICU. The simplest solution is to apply a Kelly clamp directly to the tubing connecting the cuff to the pilot balloon. However, this can disrupt the architecture of the tubing, causing additional leaks and preventing reinflation. Because we are frequently consulted to assess the "leaking endotracheal tube" in unstable medical or surgical patients, we have found three techniques to be particularly helpful.

We prefer simple solutions which do not destroy the integrity of the pilot balloon or its connecting tubing (Fig 1). A three-way stopcock (A) or a "T" connector (B) can be connected to the pilot balloon to function as a secondary valve for the system. The stopcock can be turned on or off and air injected through an attached syringe. The plastic clip of the "T" connector can be loosened to add air to the system and then clamped to keep it pressurized. If the cuff still leaks, the problem may be a hole in the pilot balloon. If this is suspected, the pilot balloon is cut from the endotracheal tube and a 22-gauge intravenous (Jelco) catheter that has been moistened with alcohol is threaded directly into the lumen (C). Alcohol helps lubricate the catheter and then "cements" it in the tube after evaporating. The other end of the catheter may be attached to either the stopcock or "T" connector (A or B) to keep the cuff pressurized.

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Reference


Oral Etoposide for a 95-year-old Patient with Small Cell Lung Cancer

To the Editor:

Treatment of small cell lung cancer (SCLC) with combination chemotherapy usually results in temporary symptomatic relief and improved quality of life. Frequently, serious side effects of this therapy are seen; therefore, most physicians are reluctant to offer

![Figure 1](http://journal.publications.chestnet.org/pdfaccess.ashx?url=/data/journals/chest/21590/)