plateau airway pressure. Four rounds of treatments/measurements were performed in three patients who were receiving nebulized treatments in our ICU; three of four cases were treated first with the catheter in the system during nebulization, followed by a second treatment with the catheter and connector removed from the system. One patient received two rounds of measurements (both with the catheter in the system for the first albuterol treatment). With the catheter in the system during treatments, airway resistance was 19.0 ± 1.5 cm H2O/L/s before and 18.1 ± 1.9 cm H2O/L/s (p = 0.24) after 2.5 mg of nebulized albuterol. Airway resistance decreased significantly from 19.4 ± 2.5 to 14.4 ± 2.6 cm H2O/L/s (p = 0.01) after 2.5 mg of albuterol administered with the suction catheter out of (removed from) the system.

Because treatments were not randomized and because there were only eight observations, we drew no conclusions from these findings. Nonetheless, these data suggest that the closed in-line suction catheter used in our hospital prevented aerosolized medication from reaching the airways of these intubated patients receiving mechanical ventilation. We suspect that the 90°, three-way connector between the ET and the wye trapped aerosolized particles. Importantly, aerosolized bronchodilators were effective when administered with another brand of in-line closed suction device.

We wish to draw the attention of readers to a retrospective study, performed at our institution, of malignant pleural effusions in medical and surgical inpatients. The presence of a pleural effusion and/or malignant cells on cytopathologic examination of a pleural fluid sample obtained from the subject by thoracentesis was required for study inclusion. Each case also had to have sufficient data to allow application of the classic criteria of Light et al. for determining whether the pleural fluid sample sent for cytopathologic examination was transudative or exudative. The presence of coexisting congestive heart failure, liver cirrhosis, or nephrotic syndrome was determined by reviewing the clinical impressions of the treating physicians as well as all relevant laboratory and imaging studies. We identified 88 patients in a 7-year period from 1991 through 1997.

We found that 8% of the malignant pleural effusions in these subjects were transudates. The average age of these patients was 70.4 years, and 47 of them were women. The primary malignancies experienced by the subjects included the following: breast (two), prostate, colon, lymphoma, small cell lung cancer, and adenocarcinoma of unknown primary. All patients underwent two-dimensional echocardiography at the time of the initial investigation of their pleural effusions. Four patients were found to have ejection fractions > 60%. Although three patients were found to have an ejection fraction < 40%, only one of these patients had clinical and/or radiographic evidence of congestive heart failure at the time of thoracentesis. No patient had evidence of liver cirrhosis or nephrotic syndrome.

Investigators have previously demonstrated that up to 20% of pleural effusions occurring in subgroups of patients with active malignant disease are transudates. However, it is unknown what proportion of these patients had positive pleural fluid cytology. In a study that used Light’s criteria to classify malignant pleural effusions, Assi and coworkers found that only 1% were transudates. Contrary to the conclusions of these authors, we feel that this low rate may provide clinicians false reassurance when evaluating patients with transudative pleural effusions. Our findings lead us to suggest that clinicians should include cytopathologic examination of the pleural fluids in the diagnostic workup of all new pleural effusions.

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REFERENCES