Communications for this section will be published as space and priorities permit. The comments should not exceed 500 words in length, with a maximum of five references; one figure or table can be printed. Exceptions may occur under particular circumstances. Contributions may include comments on articles published in this periodical, or they may be reports of unique educational character. Specific permission to publish should be cited in a covering letter or appended as a postscript.

Respiratory Tract Burns

To the Editor:

A report by Jung and Gottlieb in Chest described bronchoscopic and pulmonary function abnormalities in a patient following a drug overdose. These investigators attributed these changes to the effect of aspiration of hot coffee and the subsequent development of noncardiogenic pulmonary edema. Although the occurrence of these two events may have been related in time, other factors could have contributed to the development of the "adult respiratory distress syndrome" in this patient. Neurogenic pulmonary edema from depression of the central nervous system by the ingested drugs or hypotension or aspiration of gastric contents, which may have occurred before the patient reached the medical center, may also have precipitated the respiratory difficulties. Furthermore, the bronchoscopic findings are nonspecific. Wolfe et al recently reported the bronchoscopic findings after aspiration of gastric acid, and there are many similarities to the lesions described by Jung and Gottlieb.

These comments do not detract from the belief of Jung and Gottlieb that direct observation and follow-up via bronchoscopic examination and tests of pulmonary function are very important in situations involving burns, as well as in other processes that have a direct damaging effect on the integrity of the tracheo-bronchial tree. This is an area where further investigation is necessary.

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References


Respiratory Nomogram

To the Editor:

I am writing in regard to the article by Shapiro and Peters entitled "A Nomogram for Planning Respiratory Therapy," which appeared in the August 1977 issue (Chest 72:197-200, 1977). From the description in the article of how the nomogram was constructed, it would appear that everything was done correctly and that the values for the shunt fraction (Qs/Qt) obtained from the nomogram should correspond fairly closely to calculated values obtained by using the same shunt equation and ideal gas equation used to construct the nomogram.

I have used the shunt equation and the ideal alveolar gas equation to calculate by hand the values for Qs/Qt for two of the examples in the article by Shapiro and Peters. To use these equations, I assumed the following: calculated saturation of hemoglobin in ideal alveolar blood equals 1.00; alveolar carbon dioxide tension equals arterial carbon dioxide tension (PaCO₂); and oxygen pressure of mixed venous blood equals 40 mm Hg. I used the same assumptions as Shapiro and Peters for the following: respiratory quotient equals 0.8; PaCO₂ equals 40 mm Hg; pH equals 7.40; temperature equals 37°C; water pressure equals 47 mm Hg; and barometric pressure equals 760 mm Hg. The following two examples use the same variables used in two of the examples in the discussion of the article by Shapiro and Peters:

Example 1

The hemoglobin level equals 11 gm/100 ml, the arterial oxygen pressure (PaO₂) equals 65 mm Hg, the