

resistance remained stable, indicating that the small changes in pulmonary arterial pressure were secondary to similar small changes in cardiac output. These small changes in pulmonary arterial mean pressure and total pulmonary resistance were not significant.

### Discussion

The degree of sedation noted in these patients was comparable to that reported by others who have utilized similar intravenous doses.<sup>9,10</sup> Anxiety was effectively relieved in 11 of the 15 patients.

We noted significant decreases in cardiac indexes in only three patients, and each of these three patients had elevated control cardiac indexes ( $>3.5$  l/min/m<sup>2</sup>). There were no decreases in cardiac index in the four patients with low control cardiac indexes secondary to advanced heart disease.

The observed decreases in systemic blood pressure were not accompanied by changes in systemic resistance, indicating that significant peripheral effects did not occur. It is possible that the observed decreases in blood pressure were due, in part, to sedation. Comparable decreases in blood pressure have been observed during normal sleep.<sup>11</sup>

In contrast to the minimal changes in cardiac function, significant changes in ventilation were noted in *all* patients. The consistent decreases in minute ventilation after diazepam were due primarily to decreases in tidal volume. These decreases were accompanied by consistent decreases in PaO<sub>2</sub> and pH and increases in PaCO<sub>2</sub>. These respiratory changes did not correlate with the overt sedative effect of the drug. The respiratory changes in the

three patients who did not sleep and were not relieved of anxiety were comparable to those of the remainder of the group.

Diazepam was kindly supplied by Roche Laboratories, Division of Hoffmann-La Roche, Inc., Nutley, New Jersey.

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### Anesthesia

**RESPIRATORY DISTRESS** Immediate treatment in the delivery room of respiratory distress in the newborn consisted of establishing warmth, pulmonary inflation, and intravenous sodium bicarbonate therapy via the umbilical vein. One or two injections of bicarbonate in doses of 1 mg/lb were given in the delivery room. Follow-up acid-base determinations were done in the nursery, and further bicarbonate was given as needed. Preliminary results with 129 newborns show decreased fetal morbidity and mortality, especially in the respiratory distress syndrome. (Roberts, P., and others: *Immediate Treatment of Respiratory Distress in the Newborn*, *Amer. J. Obstet. Gynec.* 101: 293 (June) 1968.)