

lished today, could be compacted to almost abstract proportions, and still transmit a few cryptic messages. But we disagree most strongly with Dr. Steen's view that our material could or should have been presented in a single paper, for the following reasons.

First, our volunteer study set out to ask three questions: 1) Do effective analgesic doses of epidural morphine bestow a limited segmental block as originally believed, and if so for how long? 2) Are the analgesic side effects of intravenous morphine different from those of epidural morphine, and if so how long does each last? 3) How can the side effects be treated, and can we establish a working hypothesis for their causes? The first and second questions were answered, and the third partially answered, at least insofar as it cleared up some existing misconceptions in the literature. In our view, the mass of new data generated from 500 hours of observation and measurement could not be reduced and contained in a single paper, without losing much of its force and argument. The data fell naturally into two distinct parts, with rostral spread as one, and the side effects as another. There was indeed some overlap in the two papers, but this seemed a necessary price to pay for clarity of the overall picture. Unfortunately our respiratory data was not fully reduced (and is still not fully processed), and the reviewer of our second paper requested that this incomplete respiratory data be either expanded or deleted. We felt the latter course was more prudent in view of the difficulties that we were expe-

riencing in agreeing upon the correct statistical treatment of the respiratory material. Thus, the paper on side effects lost some of its more important content and the final version was less complete than we had intended.

Our second reason for full reporting and discussion was the strategic nature of the study. A literature review had failed to unearth any continuous study on the analgesic and side effects of morphine over periods of more than 6 to 8 hours. Our protracted protocol of 24- to 26-hour sessions was therefore unique both in duration, and in the quantity and diversity of the information it yielded. Moreover, the new information had both clinical and conceptual immediacy that required early and complete treatment for reasons of safety and good practice.

We trust that these observations will give Dr. Steen some insight into the events and intents that led to the publication of two papers instead of a single truncated and incomplete version of the total picture.

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(Editorial Comments)

The interested reader is encouraged to compare the two Bromage *et al.* articles before arriving at a judgment.

THE EDITOR

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Respiratory Assistance Secured by Jet-Ventilation during Broncho-Fiberscopy in Forty-nine Infants

To the Editor:—Bronchofiberscopic examinations remain hazardous in infants with respiratory distress. To prevent dramatic impairment of gas exchange, we developed a method of respiratory assistance using jet-ventilation which has been used in 49 infants of three days to three years of age. Similar to the study of Satyanara

et al.,¹ the injector was connected directly to the suction-channel of the fibroscope, which served as the jet-channel. Ventilation variables were regulated preoperatively by measuring delivered oxygen pressure and volume at the tip of the bronchoscope. Insufflation time was limited to 0.3–0.5 s with an inspiratory to expiratory ratio