

statistical manipulations that they have applied to their data.

As Takasaki *et al.* point out, the very large difference in dose requirements between their series and ours may be explained by the sevenfold difference in spreads of the injections. In their series large dose requirements were associated with a very slow injection rate of 0.15 ml/sec, whereas in our series lower dose requirements were associated with an injection speed of 1 ml/sec. Contrary to their suggestions, we did not find that uneven or unsatisfactory analgesia resulted from rapid injection. Physical spread verified by roentgenography and pharmacologic spread verified by clinical examination showed a uniform and symmetrical distribution. Takasaki *et al.* question the efficacy of our blocks, and the validity of our data, since our patients were given light nitrous oxide-halothane anesthesia for humanitarian reasons. In fact, our observations of segmental spread were made within 60–90 min of injection, and the upper level of analgesia was stable during that time; any regression in dermatome level would have given a falsely high rather than a falsely low value for dose requirements.

Finally, we are astonished by the hybrid statistical treatment that Takasaki *et al.* have applied to their

data in figure 1, where volume dose requirements are plotted against body weight. All children of less than 8 kg body weight received 1 per cent lidocaine, while all those weighing 8 kg or more received 50 per cent more drug (1.5 per cent lidocaine). They have taken these two disparate groups and treated them as if they were a single homogeneous population. We submit that this is a highly improper and misleading statistical manipulation, and that the convincing-looking correlation coefficient of 0.93 in figure 1 is meaningless.

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In reply:—In our experience of more than 300 pediatric cases, both body weight and age correlate well with the segmental dose requirements for caudal anesthesia. In the study we reported in this journal, more than half of the subjects (163/250) were less than 2 years of age. We used lidocaine, 1 per cent, for 51 infants less than 8 kg in body weight, and 1.5 per cent solution for 199 children weighing more than 8 kg. The concentration of lidocaine that would produce an adequate block was selected. In a previous paper, we reported that dose requirements were 0.04 ml/kg thoracic spinal segment and 0.05 ml/kg lumbar spinal segment in both groups, regardless of the concentration of lidocaine.¹ This is the reason we plotted volume dose requirements against body weight in figure 1.

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Dental Anesthesia

To the Editor:—I was particularly interested in the comments of Dr. McLaughlin¹ and Drs. Klein, Wollman, and Cohen² regarding anesthesia in dentistry. In all institutions the anesthesia training afforded a dental resident in anesthesiology is parallel

to that given to a medical resident in anesthesiology. Didactic and clinical training has been updated so that most anesthesiology training programs for dentists are now a minimum of one year, or more often two years. The full-time dental resident in anesthesiology

is under the supervision and instruction of medical and dental anesthesiologists. The instruction in the operating room is directed towards both inpatient and outpatient care of the anesthetized patient. The dental residents are then taught office-type anesthesia in the outpatient clinic of the department of dentistry. The dentist-anesthesiologists are taught when they do go into private practice to operate as a team of two dentists or two oral surgeons. Monitoring of the patient's vital signs is routine during the pre-, intra- and postoperative periods. Facilities for excellent recovery room care are mandatory, and well established. Those of us in anesthesiology for dentistry are equally concerned that optimum care be given a dental patient who needs general anesthesia.

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To the Editor:—Having read Dr. McLaughlin's letter in the May 1978 issue of ANESTHESIOLOGY,¹ we feel that the reply by Drs. Klein, Wollman, and Cohen² is inadequate.

A three-month training program in general anesthesia is not considered adequate, nor is it acceptable for a dentist to administer general anesthesia and render dental treatment simultaneously, any more than it is acceptable for a physician-anesthesiologist to administer anesthesia to several patients in different operating rooms at the same time. In addition, it is unconscionable to state that patients who need dental treatment should be denied the full range of pain control methods that are available for other health services.

The American Dental Society of Anesthesiology requires a minimum of one year of full-term hospital training in general anesthesia for eligibility for its Fellowship program. The American Dental Association and a number of state boards have accepted this criterion.

The economic impact on the patient would be overwhelming if every general anesthetic were to be administered in a hospital, the cost easily being three

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Rational Use of a Scavenging Mask

To the Editor:—One of the commonest faults in the conduct of dental anesthesia is to neglect the critical balance between fresh gas flow and suctioning at the mask. Considered superficially, the very idea of the scavenging mask seems so self-defeating as to be ludicrous, for if the velocity of suctioning equals or exceeds

to four times what it is in the dental suite. In addition, there is serious question as to the ability of institutions and personnel to handle the multitudes who need these services daily if that were to become a requirement.

Dentistry's role in general anesthesia and other methods of pain control requires no apology. From Wells to Heidbrink to Monheim, we have contributed to discovery and progress in the field of anesthesiology. This progress will not be sidetracked. Training programs that we need and want must continue to be developed.

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the peak velocity of fresh gas flow plus peak expiratory flow rate, not one molecule of nitrous oxide will become available to the patient. On the other hand, if the velocity of inspiratory flow exceeds the velocity of fresh gas flow, rather more resistance than was intended in the Brown Exhalation Valve (McKesson)