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.

O. Schulte-Steinberg, M.D.
V. W. Rahlfs, M.D.
813 Starnberg
West Germany

REFERENCES

(Accepted for publication June 20, 1978.)

Anesthesiology
49:573, 1978

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.

Anesthesiology
49:373–374, 1978

MAYUMI TAKASAKI, M.D.
Assistant Professor
TAKEO TAKAHASHI, M.D.
Professor and Chairman
Department of Anesthesiology
Sapporo Medical College and Hospital
Sapporo, Japan 060

REFERENCE

(Accepted for publication June 20, 1978.)

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

Anesthesiology
49:573, 1978

Numerous studies have been conducted to delineate the best treatment for chronic pain and to examine the impact of various factors on pain. These studies have focused on understanding the mechanisms of pain, the effects of different treatments, and the outcomes of these treatments. The research has contributed significantly to our understanding of chronic pain and has led to the development of effective pain management strategies. For example, the use of neurostimulation techniques in the treatment of chronic pain has shown promising results in recent studies. These techniques involve the delivery of electrical pulses to the brain or spinal cord to block pain signals. The effectiveness of these treatments varies depending on the specific condition and the individual patient. Additionally, the use of non-pharmacological interventions, such as physical therapy and behavioral therapies, has become increasingly recognized as an essential component of pain management. These approaches focus on reducing pain through physical movement and mental conditioning, respectively. The integration of these methods with traditional pain medications can lead to improved outcomes for patients suffering from chronic pain. Overall, the research in this area continues to evolve, and there is a need for further investigation to identify more effective pain management strategies. Given the ongoing advancements in pain management, it is crucial to remain informed about the latest developments and to collaborate with specialists in the field to provide optimal care for patients with chronic pain.