youngest group (10 kg mean weight) resulted in a mean recovery time of 69 min. The same 0.3-mg/kg dose of tetracaine administered to their adult group (55 kg mean weight) resulted in a mean recovery time of 336 min. The recovery times in the three intermediate age groups were also proportional to the doses of tetracaine. Since the authors were apparently able to control the level of their spinal anesthesia at T3–4 dermatome, they could detect excessive doses of tetracaine only by prolonged recovery times. The fivefold increase in the mean recovery times from 69 to 336 min is clinically significant and demonstrates this imperfection in their estimation of tetracaine dose by body weight.

Although I do not have data to substantiate my claim, I favor the use of body surface area (BSA) for determining the doses of tetracaine for use in children and adults. Thus, the 3-mg dose of tetracaine used for the 10-kg child with a BSA of 0.45 m^2 would compare to approximately 10 mg tetracaine for a 55-kg adult with a BSA of 1.6 m^2. The latter adult dose is considerably less than the 17 mg used by Dohi et al.

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REFERENCE

1. Dohi S, Naito H, Takahashi T: Age-related changes in blood pressure and duration of motor block in spinal anesthesia. ANESTHESIOLOGY 50:319–323, 1979

In reply:—Dr. Feingold has correctly pointed out an important omission in our discussion of the factors that have affected our results. We are aware of the significant differences between the doses calculated from body weight and those calculated from body surface area (BSA). As he suggested, if we had used BSA for determining the doses of tetracaine in children and adults, it is possible that the differences in recovery times of 69 min in our youngest children and 336 min in our adult group might be lessened. Figure 3 of our article, showing a linear relationship between recovery times and the ratio of BSA to unit mg of tetracaine, may support the claim proposed by Feingold.

We did not conclude in our article that the dosage of tetracaine for children is best calculated on the basis of body weight. However, because of the clinical impressions that children regain motor function from spinal anesthesia more rapidly than do adults, we believe that it would be preferential to use the dosage based on body weight. Using the dosage calculated from BSA, giving tetracaine, 17 mg, to a 55-kg adult with a BSA of 1.6 m^2 will achieve a T3–4 level of sensory blockade, which would be comparable to a dose of 4.8 mg for a 10-kg child with a BSA of 0.45 M^2. Since almost all children studied had T3–4 levels of sensory blockade with use of tetracaine, 0.3 mg/kg, the above-mentioned dose may result in total spinal anesthesia in a child of this size.

Although it remains to be proven, we do not believe that we can predictably establish a level of spinal anesthesia at T3–4 dermatomes using tetracaine, 10 mg, in a 55-kg adult with a height of 168 cm. In addition, the comparison in durations of motor blockade between a child with a T3 level of spinal anesthesia and an adult with a T10 level is not reasonable.

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