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Correspondence

Anesthesia for the Foot

To the Editor:—I found the article, "Ankle block anesthesia for foot surgery" (ANESTHESIOLOGY 44:348–352, 1976) of considerable interest. If Dr. Schurman had investigated the recent literature more thoroughly, he would have discovered a larger and more complete examination of the issue in my paper, "Regional anaesthesia for the foot" (Can Anaesth Soc J 12:465–474, 1965).

There is one difference in technique. I chose to do a lateral popliteal block instead of a combined anterior–tibial block and subcuticular injection. Not only is one injection better than two, but the lateral popliteal is a much easier, more successful and reliable technique than is the anterior tibial block.

The foot drop is not a significant complication.

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Dose, Potency, and Square Root of Time

To the Editor:—When Miller and Eger (ANESTHESIOLOGY 44:297–300, 1976) describe the "early and late relative potencies of pancuronium and *d*-tubocurarine in man," they attribute the pharmacokinetic differences to metabolism, renal excretion, plasma and tissue binding. My analysis of their data shows that the pharmacokinetic differences between these drugs of different potencies is most easily explained by different loading doses.

By taking the data from their table and graphs, obtaining the cumulative doses, and plotting these against the square root of elapsed minutes (fig. 1), an excellent linear correlation is obtained. The cumulative doses of both muscle relaxants are proportional to the square roots of minutes. The least squares best-fit lines for the data appear in the figure together with the correlation coefficients (r).

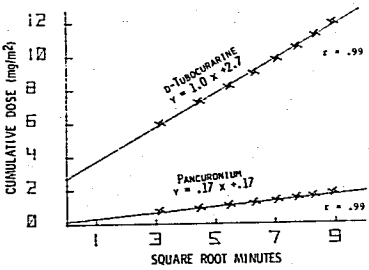

FIGURE 1.

This analysis permits several inferences within the scope of their study: 1) The main difference between the pharmacokinetics of *d*-tubocurarine and pancuronium is the loading dose, *i.e.*, that initial dose needed to obtain 90 per cent twitch depression. Following the loading doses, the pharmacokinetic effects of tissue binding, redistribution, metabolism, and excretion are similar and do *not* require that "doses of *d*-tubocurarine should be reduced proportionally more with time than doses of pancuronium." One explanation for the relative larger loading dose of *d*-tubocurarine is greater binding to plasma proteins. 2) The best estimate of the relative potencies of pancuronium and *d*-tubocurarine is the ratio of the slopes of these two best-fit lines, *i.e.* 1/.17, or 5.9. This ratio is somewhat larger

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