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Commentary

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The authors draw attention to the incidence of potentially toxic gentamicin concentrations in the newborn. They point out that toxicity in the neonate is not well documented and it is important to stress this. The publication of this report, and others like it, is apt to substantiate and give further credence to the belief that aminoglycoside oto- and renal toxicity are likely and clearly established adverse effects in newborn practice. This is not the case and there is little evidence to suggest that the use of trough values below 2 mg/l and peak values below 12 mg/l are appropriate guidelines in newborns, infants, or children. Indeed, the manipulation of dosing to produce concentrations conforming with these values may so necessitate extension of the dose interval that efficacy is compromised. For the present, the major indication for monitoring values is to determine whether values clearly above the minimal inhibitory concentration of the likely causative organism are reached.

The results of a large North American study on adverse effects in newborns is expected shortly. Until this time and the time when further appropriate and definitive data are available, it seems reasonable to monitor aminoglycoside values as in this paper, particularly to show expected efficacious concentrations. A cautionary approach to the interpretation of values commonly considered to be toxic is, however, suggested.