





**FIGURE 1.** Concentration–time profiles, including infusion rate for 2 patients in which aberrantly high concentrations of salbutamol, were analyzed. The measured R-salbutamol and S-salbutamol concentrations and infusion rates are presented in the figure. Patient A restarted nebulization at 10 hours after inclusion, and patient B restarted nebulization at 18 hours after inclusion.

for S-salbutamol for the volunteer holding the system at the mask.

**CONCLUSIONS**

After nebulizing, skin contamination can result in falsely elevated plasma concentrations in finger-prick blood samples. The contamination is

probably lesser on the hand holding the system at the reservoir than the mask; however, the fingers are still contaminated. The extreme high concentrations may be the result of a longer nebulizing period, or the child touching the mouth or the inner side of the device. We expect this contamination is

comparable in new dried-blood spot techniques using finger-prick sampling. Finger-prick blood sampling should be used cautiously in therapeutic drug monitoring and pharmacokinetic studies of nebulized drugs. To overcome this problem, blood sampling practices for these drugs should be carefully considered to prevent elevated levels and corresponding biased conclusions. As a precaution, wearing gloves on the sampling hand or traditional venipuncture (if the sampling place is covered during inhalation) should be considered. Cleaning techniques using both alcohol wipes or water and soap result in unpredictable contamination.

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