Response to the Letter 'Intraperitoneal Route for Vancomycin in CAPD Patients' by D. Benevent et al.

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Dear Sir,

We agree with Benevent et al. [1] that our serum vancomycin levels at 48 h do not reflect the peak and that some of our patients may have achieved high serum peak levels. We are surprised by the very high serum peak levels in 2 of their 13 patients, as similar doses of Vancomycin given intravenously (1 g) produced peak levels of 33.7 ± 3.8 and $34.8 \mu\text{g/ml}$ 1 h after termination of intravenous infusions in normal adults and in CAPD patients with peritonitis, respectively [2]. In regard to ototoxicity, we have now expanded our experience with this protocol to 24 episodes of peritonitis that were treated with 2 intraperitoneal doses of vancomycin (30 mg/kg). Five of these patients had 'sterile' peritonitis and received 2 weeks of gentamicin (8 mg/ l.i.p.) as well, after an intravenous loading dose. In 21 instances (some among these 24 episodes), patients have received one intravenous loading dose of gentamicin (2.5 mg/kg) plus at least one intraperitoneal loading dose of vancomycin. In none of these patients have we observed any clinical evidence of ototoxicity, although we admit that minor problems may not have been reported by the patients, and as we have not performed any detailed audiologic studies, we may have missed subclinical defects. Nor did Krothapalli et al. [3], who administered 4 intravenous doses of vancomycin (1 g each, 15 mg/kg) at weekly intervals, observe any clinical evidence of ototoxicity in 62 episodes of peritonitis.

In summary, we agree that: (a) Some patients may achieve high serum concentrations of vancomycin and/ or gentamicin and may suffer from subclinical or mild clinical ototoxicity, as suggested by Benevent et al. [1] (b)

More vancomycin is absorbed from the inflamed than noninflamed peritoneum (74% vs. 54%, respectively), after 6 h of peritoneal dwell; data submitted to Perit. Dial. Bull., so that smaller amounts of vancomycin may be sufficient and safe to administer initially; (c) The initial intravenous loading dose of gentamicin (2.5 mg/kg) for those with a negative gramstain, which was adopted to avoid intraperitoneal administration of gentamicin in the first 48 h until culture results become available, may in fact be too much. For this reason we have recently changed the protocol to 2 mg/kg. We believe further studies with careful audiometric evaluation of the patients are necessary to clarify some of these unresolved issues.

References

Benevent, D.; Lagarde, C; Darnis, M.C.: Intraperitoneal route for vancomycin in CAPD patients. Nephron 49:173 (1988).

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