

Biapenem

A Viewpoint by Yukimichi Kawada

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Biapenem is a novel parenteral carbapenem agent with a broad spectrum of *in vitro* activity against both Gram-positive and Gram-negative aerobic and anaerobic bacteria. It exhibits enhanced activity against some Gram-negative bacteria, including *Pseudomonas aeruginosa*, compared with imipenem.

Biapenem is stable to hydrolysis by human dihydropeptidase-I (DHP-I) and therefore can be used as a single agent without coadministration of a DHP-I inhibitor.

High concentrations of biapenem are achieved in plasma, target tissues and fluids after intravenous administration. The mean plasma half-life is 1.03 hours after a single intravenous dose of

300mg. Therefore, in Japan, the recommended dosage of biapenem is 300mg, administered as an intravenous infusion, twice daily.

Because of its activity against Gram-negative bacilli and anaerobes, biapenem is useful in the treatment of intra-abdominal infections. Biapenem is also highly effective in the treatment of complicated urinary tract infections, including those caused by *P. aeruginosa*.

Biapenem is generally well tolerated. Notably, adverse events related to the central nervous system have not yet been reported.

In conclusion, biapenem is a useful addition to the parenteral carbapenems currently available for use in the clinical setting and has an important role in the treatment of patients with severe bacterial infections. Further studies of the efficacy and tolerability of biapenem in the treatment of septicemia should be performed in the near future. ▲