

Gentamicin*

Class: Aminoglycoside

Overview

Gentamicin is an extended spectrum aminoglycoside that became available in 1963. Gentamicin is bactericidal. This antimicrobial preparation is one of the most common aminoglycosides used in children.

Resistance

See also the discussion of resistance in the general overview of *Aminoglycosides*.

Effectiveness

Gentamicin is considered effective against aerobic Gram-negative organisms, some Gram-positive organisms (such as *Staphylococcus aureus*) and *Pseudomonas aeruginosa*. In human medicine this aminoglycoside, despite potential toxicity, is one of the drugs utilized in initial therapy for pyelonephritis. Gentamicin can be added to the dialysate to treat peritonitis secondary to peritoneal dialysis. Gentamicin also is characterized by excellent synergistic potential when utilized along with penicillin or other β -lactam antibiotics in therapy for aerobic Gram-positive bacteria. In fact the combination of gentamicin with broad spectrum β -lactams has been a mainstay in intensive care therapy for many years. The drug is used along with clindamycin and ampicillin in therapy for bowel perforation or appendicitis when Gram-negative bacteria or *Bacteroides* species predominate. Gentamicin is combined with first generation cephalosporins in therapy for severely infected open fractures and wounds. The drug is also combined with clindamycin in treatment of peri-rectal abscesses in humans.

***References available by request. Call the Infectious Disease Epidemiology Section, Office of Public Health, Louisiana Department of Health and Hospitals (504-219-4563)**