

Thesis Title Drug Utilization Evaluation of The
 Parenteral Cephalosporins in
 Children's Hospital

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ABSTRACT

A study was performed to evaluate the appropriateness of use of the five parenteral cephalosporins (cefazolin, cefuroxime, cefotaxime, ceftriaxone, ceftazidime) in medical wards and surgical ward at the Children's Hospital Bangkok. Data were collected between June-November 1992.

The determination of therapy was considered whether parenteral cephalosporin utilization was relevant to our standard or not. Then, the result was categorized according to criteria (appropriate, inappropriate, and questionable). Finally, cost of drug therapy of each category was estimated.

Of all 3,261 patients 226 were prescribed parenteral cephalosporins during the five month period. Cefotaxime had the highest utilization (56.98%). There were 18 diseases which comprised of 265 courses of drugs. Approximately, half of the drug therapy was for pneumonia (53.17%). The 265 courses were divided into 227 treatment courses and 38 prophylaxis courses. Cefuroxime and cefazolin are commonly used in surgical prophylaxis. The 48 of the 265 courses was used inappropriately which resulted in wasting of budget of 110,299.56 baht. The main causes of the inappropriateness were dose, duration of therapy (category 4) and unjustified administration (category 5).

Inappropriate utilization also lead to the bacterial resistance of the parenteral cephalosporins. From the study, it was found that some cases of *Pseudomonas aeruginosa* infection resisted to all third-generation cephalosporins in the Children's Hospital.

The problem solving of the inappropriateness of parenteral cephalosporin utilization from this study was used as a guideline for antibiotic utilization for the Children's Hospital.