



Correct Dose for Appropriate Indication

Patient Case A

Cefotaxime (Claforan) was ordered for a 2 weeks old baby at dose of 50mg/kg for every 8 hours. The calculated dose is 130 mg (baby weight was 2.6 kg). Per the chart notes in the client hospital's information system, the patient's care providers were suspecting meningitis. Meningitis is an inflammation of the membranes of the brain or the spinal cord. Bacterial meningitis is a potential life-threatening condition that can cause permanent brain damage, hearing lost and neurologic problems and can lead to death. Thus if meningitis is suspected, treatment has to be precise. The order for cefotaxime had notes written on the order itself to state that it was for treatment of Urinary Tract Infection (UTI). The dose of cefotaxime for the treatment of UTI, is 130mg q8hr (every 8 hours) but if it is being used for meningitis, the dose should be 130mg q6hr (every 6 hours.) The PipelineRx pharmacist paged the prescriber, but did not receive an answer. She then spoke to the bedside nurse and asked for a clarification. The nurse said it was for UTI, as stated in the comments on the drug order. The PipelineRx Pharmacist did not approve the medication order and re-paged the prescriber who then spoke with the Pediatric Infectious Disease team. They confirmed that the order was in fact written for treatment of meningitis. The original order was then changed to 130mg q6 hours IV.

The result of this was greater efficacy of treatment, faster recovery for the patient, shorter time spent in the hospital and prevention of serious consequence from meningitis.

Patient Case B

The patient had been on vancomycin 1000mg q12hr (every 12 hours). Vancomycin is an antibiotic that is being dose base on the infection. To assure if the vancomycin is being dose appropriately, the trough level of the drug should be measured. The vancomycin trough level for this patient was measured and is within the accepted therapeutic range for this this drug which is 10-15 mcg/ml. However, per the order notes, the patient was being treated for cellulitis with abscess. Cellulitis is a bacterial infection on the deepest layers of the skin. Cellulitis can be severe if not treated properly to prevent, leading to the infection spreading to the bloodsteam. Vancomycin is an accepted antibiotic for this infection but requires a higher dose to yield a higher trough level. The PipelineRx pharmacist contacted the patient's physician and recommended to increase the vancomycin dose to 1250mg q12hrs. Based on the patient's weight and renal function, this would yield a higher trough level between 15-20 mcg/ml instead of the normal 10-15 mcg/ml trough. The prescribing doctor reported that the cellulitis was severe and agreed to change the dose.

The result of this was greater efficacy of treatment, faster recovery for the patient and shorter time spent in the hospital.