

ABSTRACT

Quantitative Evaluation of Antibiotics Use in Orthopedic Patient

"Literature Review"

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Antibiotic resistance is the ability of bacteria to survive against the effect of using antibiotic so that antibiotic is not effective in clinical use. Inappropriate use of antibiotic and the spreading of resistance bacteria are risk factors for developing resistance. Evaluation of using antibiotic is an effort to build quality control so can avoid unwise use of antibiotic. Defined Daily Dose (DDD) is a method of counting the amount of drugs recommended by WHO and Minister of Health to value the use of antibiotic. By using ATC/DDD, monitoring and comparing the using of medicine among countries, regions or health service facilities can be done. Sixteen publications are used as a literature reviews which are to determine the quantitative profile of antibiotic use in orthopedic.

The result shows the most used antibiotics in orthopedic is first generation cephalosporin that is cefazolin which is also supported by four other publications with DDD values of cefazolin in each reasearch: 128,43 DDD/100 operations, 336,4 DDD/100 operations, 93,13 DDD/100 operations, and 426,8 DDD/100 operations. The use of prophylactic antibiotics has been in accordance with international guidelines. For therapeutic antibiotic use, it depends on the type of infection, such as cases of C. Difficile infection shows the most antibiotic use is narrow spectrum penicillins of 52 DDD/100 bed-days. Intervention in several studies produced positive results, such as decrease in the quantity of antibiotic use and increase in the rationality of using antibiotics. In the future, it is hoped that this study can become a basis for developing guidelines to reduce the risk of antibiotic resistance.

Keywords: Antibiotic, Orthopedic, Defined Daily Dose