# Abstract

**Title: Assessment of Potential Drug Interactions in Inpatients Treated in Tikur Anbessa Specialized Hospital.**



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Drug interaction is an event that occurs when effects of a drug are modified when another drug is taken concomitantly. Drug interactions can be classified, according to mechanisms by which drugs interact with each other, as pharmaceutical, pharmacokinetic and pharmacodynamic. Although the concomitant use of multiple drugs often increases therapeutic effectiveness, certain combinations are harmful. This study was launched to assess the prevalence of potential drug interactions in internal medicine ward of Tikur Anbessa Specialized Hospital. A cross-sectional study was conducted in internal medicine ward of Tikur Anbessa Specialized Hospital from April 23 to July 23 on randomly selected patients who were taking at least two concomitant drugs during their stay in the ward.

At least one potential drug-drug interaction was found in 78.2% of the patients. The mean number of potential drug interactions per patient was 3.7±3.4. Out of the 719 potential drug interactions identified, 49.8% were of pharmacokinetic type, 44.6% were pharmacodynamic and the rest 5.6% were with not fully understood mechanisms. Major potential drug interactions accounted for 13.1% of the whole interactions; 53.5% were moderate interactions and the rest 33.4% were minor interactions. Ceftriaxone, cimetidine and heparin were the three most involved drugs in major potential interactions. Prescription of five or more concomitant drugs was associated with high risk of encountering potential interactions.

The findings of this study indicate that the prevalence of potential drug interactions was high. Pharmacokinetic interactions showed subtle predominance over pharmacodynamic ones. Efforts to reduce the risk of potential drug interactions should be made by physicians and pharmacists.



**Key words:** Potential drug interaction, Tikur Anbessa Specialized Hospital