



Extent of Potential Drug-Drug Interactions in Patients Receiving Antihypertensive Medications in Two Tertiary Hospitals of Pakistan

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SUMMARY. In many complicated diseases such as hypertension, polypharmacy is done to treat the condition and every year a number of new drugs are introduced in market for such diseases. Increase in drugs prescribed per prescription also increases the chances of drug-drug interaction. The purpose of this record based study was to evaluate the extent of potential drug-drug interactions in patients receiving antihypertensive medications. Total 506 cases were randomly collected from two government hospitals of Punjab province (Benazir Bhutto Shaheed hospital, Rawalpindi and Bahawal Victoria hospital, Bahawalpur). Micromedex® Drug Information software was employed to elaborate potential drug-drug interactions. The potential drug-drug interactions were found in 320 (63%) prescriptions. Total 540 interactions were reported with an average of 1.68 interactions per prescription. Percentage of male patient prescription with interaction was 59.37% (190 cases) while 40.62% (130 cases) were of females. The most common interacting pairs found were furosemide-aspirin which was observed in 98 cases (18.1%), captopril-aspirin 94 (17.4%) and captopril-Furosemide in 70 (12.9%) cases. Our study concluded that 63% of the prescriptions had potential drug-drug interactions, which is quite high and needs importance and awareness by medical professionals. Pharmacist intervention in prescription evaluation and using such software which are updated and differentiates clinically significant and non significant drug interactions can decrease the extent and frequency of interactions and can make the therapy more affective.

RESUMEN. En muchas enfermedades complejas como la hipertensión, la polifarmacia se realiza para tratar la enfermedad y cada año un número de nuevos medicamentos se introducen en el mercado para este tipo de enfermedades. El aumento de los medicamentos prescritos por receta también aumenta las posibilidades de interacción fármaco-fármaco. El propósito de este estudio fue el de evaluar el alcance de las posibles interacciones entre medicamentos en pacientes que reciben medicación antihipertensiva. Un total de 506 casos fueron recogidos al azar de dos hospitales públicos de la provincia de Punjab (hospital Benazir Bhutto Shaheed, Rawalpindi y hospital Bahawal Victoria, Bahawalpur). El software Micromedex® Drug Information fue empleado para elaborar las posibles interacciones entre medicamentos, que fueron encontradas en 320 prescripciones (63%). Un total de 540 interacciones fueron reportadas con una media de 1,68 interacciones por receta. El porcentaje de pacientes masculinos fue 59,37% (190 casos), mientras que el 40,62% (130 casos) fueron mujeres. Los pares de interacción más frecuentes corresponden a la furosemida-aspirina, que se observó en 98 casos (18,1%), captopril-aspirina en 94 casos (17,4%) y captopril-furosemida en 70 casos (12,9%). Nuestro estudio concluyó que el 63% de las prescripciones tuvo potenciales interacciones fármaco-fármaco, que es bastante importante y debe concientizar a los profesionales médicos. La intervención del farmacéutico en la evaluación de la prescripción y el uso de este tipo de software permite diferenciar a las interacciones farmacológicas clínicamente significativos de las no significativas puede reducir el alcance y la frecuencia de las interacciones y hacer la terapia más efectiva.

KEY WORDS: Antihypertensive, Cardiovascular, Drug interactions, Hypertension, Pakistan.

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