



Assessment of Potential Drug-Drug Interactions and their Associated Factors in Hospitalised Diabetic Patients

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SUMMARY. This research was performed in order to identify prevalence, types and factors associated with potential drug-drug interactions (pDDIs) in the diabetic patients in the endocrinology department of Ayub Teaching Hospital (ATH) and to report common interactions. Patient charts of 235 patients were evaluated for pDDIs using Micromedex® Drug Information. We found 42 interacting-combinations that appeared in total 115 pDDIs. Overall 39.1% patients were having minimum one pDDI; 0.4% had minimum of one contraindicated pDDI, 30.6% had minimum one major pDDI, and 13.2% patients were having minimum one moderate pDDI. Amongst 115 pDDIs that we found, majority of them were moderate (61.8%) or major severity (43%); established (19.1%), theoretical (24.35%) or probable (56.52%) type of scientific evidence. Top 10 common pDDIs included 5 major and 5 moderate interactions. A significant association was noticed for the incidence of pDDIs with patient with age of 60 years or more ($p < 0.044$), and having 7 or more prescribed medicines ($p < 0.001$). We have recorded an elevated prevalence of pDDIs in the diabetic patients at the department of endocrinology; most of them were of moderate severity. Old aged diabetic patients and those with polypharmacy had more chances of vulnerability to pDDIs. The development of a pDDI database in hospitals may help with the surveillance of pDDIs in hospitalised diabetic patients.

RESUMEN. Esta investigación se realizó con el fin de identificar la prevalencia, tipos y factores asociados con potenciales interacciones fármaco-fármaco (pDDIs) en los pacientes diabéticos en el Servicio de Endocrinología del Hospital Docente Ayub (ATH) y para informar de las interacciones comunes. Los informes de de 235 pacientes fueron evaluados para pDDIs utilizando la Información de Medicamentos Micromedex®. Encontramos 42 combinaciones de interacciones en un total de 115 pDDIs: 39,1% de los pacientes totales estaban teniendo un mínimo de una PDDI; 0,4% tienen un mínimo de una PDDI contraindicada, 30,6% tenían un mínimo de una PDDI importante y 13,2% de los pacientes tenían un mínimo de una moderado. Entre 115 pDDIs que encontramos, la mayoría de ellos eran moderados (61,8%) o PDDI de mayor gravedad (43%); el tipo de evidencia científica fue establecida en el 19,1% de los casos, teórica (24,35%) o probable (56,52%). Las diez pDDIs más comunes incluyen 5 interacciones principales y 5 moderadas. Existe una asociación significativa de la incidencia de pDDIs en pacientes de 60 años o más ($p < 0,044$), y en los que tienen 7 o más medicamentos prescritos ($p < 0,001$). Hemos registrado una elevada prevalencia de pDDIs en los pacientes diabéticos en el departamento de endocrinología; la mayoría de ellos eran de gravedad moderada. Pacientes diabéticos ancianos de edad y personas con polifarmacia tenían más posibilidades de vulnerabilidad a pDDIs. El desarrollo de una base de datos PDDI en los hospitales puede ayudar con la vigilancia de pDDIs en pacientes diabéticos hospitalizados.

KEY WORDS: Diabetes, Prevalence, Drug-drug interactions.

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