



Utilization of Oral Hypoglycemic Agents in Wuhan, China: A 5-year Retrospective Study

Rui HUANG¹, Ping GAO², Donghua ZHOU¹, Guozheng LIU³ & Zerong HOU^{4*}

¹ School of Pharmacy, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, Hubei, China, 430030

² Department of Pharmacy, Wuhan Children's Hospital, Wuhan, Hubei, China, 430016

³ Suizhou Central Hospital, Suizhou, Hubei, China, 441300

⁴ Public Health Bureau of Tianjin Binhai New Area, Tianjin, China, 300000

SUMMARY. China has been experiencing an epidemic of diabetes in recent years. To promote rational drug use, we herein retrospectively analyze the utilization patterns of oral hypoglycemic agents in 24 hospitals in Wuhan, China from 2008 to 2012. Drug consumption was analyzed by the ATC/defined daily dose (DDD) method, and number of defined daily doses (DDDs) and daily drug cost (DDC) were analyzed as well. In all the hospitals, antidiabetic drug sales and DDDs increased annually, whereas DDC decreased. Acarbose, repaglinide, metformin, gliclazide and glimepiride dominantly accounted for 79.73% and 76.53% of total sales and DDDs in the 5 years, respectively. Besides, the sales and DDDs of voglibose were elevated rapidly, while rosiglitazone and traditional Chinese patent medicines were used less frequently. In conclusion, metformin, α -glucosidase inhibitors and 2nd-generation sulfonylureas predominate in the treatment of diabetes hitherto. Meanwhile, novel eligible oral hypoglycemic agents are commercially potential.

RESUMEN. China ha estado experimentando una epidemia de diabetes en los últimos años. Para promover el uso racional de los medicamentos, en este documento analizamos retrospectivamente los patrones de utilización de hipoglucemiantes orales en 24 hospitales en Wuhan, China, entre 2008 y 2012. El consumo de drogas se analizó mediante el método ATC/dosis definida diaria (DDD) y se analizaron también el número de DDDs y el costo diario del medicamento (DDC). En todos los hospitales, las ventas y las DDD de medicamentos antidiabéticos se incrementaron anualmente, mientras que disminuyó el DDC. Acarbose, repaglinida, metformina, gliclazida y glipepirida representaron el 79,73 de las ventas totales y el 76,53% de las DDD en los 5 años. Además, las ventas y las DDD de voglibosa se elevaron rápidamente, mientras que la rosiglitazona y medicinas de patente tradicionales chinas se utilizaron con menos frecuencia. En conclusión, metformina, inhibidores de α -glucosidasa y sulfonilureas de segunda generación predominan en el tratamiento de la diabetes hasta la fecha. Mientras tanto, los nuevos agentes hipoglucémicos orales son potencialmente comercializables.

KEY WORDS: Daily drug cost, Defined daily dose, Drug utilization research, Oral hypoglycemic agents.

* Author to whom correspondence should be addressed. E-mail: hys19810612@163.com