

Identification of Constituents *In Vitro* and Blood-absorbed Components of Lipid-lowering TCM formula HongquFuling Decoction by UPLC-Q-TOF-MS/MS

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SUMMARY. Traditional Chinese medicine (TCM) has unique advantages in the treatment of hyperlipidemia, not only for its lipid-lowering effects, but also for the prevention of the disease in its early stage. In this paper, hypolipidemic effect substances of HongquFuling Decoction (HFD), an effective TCM lipid-lowering formula with little adverse reactions was studied by UPLC-QTOF-MS/MS. Fifty-five components absorbed into blood after SD rat administered HFD extract orally were finally identified, including statins, glycosides, and organic acids, etc. The pharmacological effects of these components elaborated respectively the TCM theory of lipid-lowering, liver-protective and gastrointestinal-protective effects of HFD. This study was of great significance for clarifying the pharmacodynamic material basis, and provided theoretical and experimental basis for the establishment of quality control markers and quality control methods of HFD.

RESUMEN. La medicina tradicional china (MTC) tiene ventajas únicas en el tratamiento de la hiperlipidemia, no sólo por sus efectos hipolipemiantes, sino también por la prevención de la enfermedad en sus primeras etapas. En este artículo, se estudiaron mediante UPLC-QTOF-MS/MS las sustancias con efecto hipolipidémico de la decocción HongquFuling (HFD), una fórmula hipolipemiente eficaz de la medicina tradicional china con pocas reacciones adversas. Finalmente se identificaron cincuenta y cinco componentes absorbidos en la sangre después de que a la rata SD se le administrara extracto de HFD por vía oral, incluidas estatinas, glucósidos y ácidos orgánicos, etc. Los efectos farmacológicos de estos componentes elaboraron respectivamente la teoría de la medicina tradicional china sobre la reducción de lípidos, la protección del hígado y el sistema gastrointestinal. -efectos protectores de la HFD. Este estudio fue de gran importancia para aclarar la base del material farmacodinámico y proporcionó una base teórica y experimental para el establecimiento de marcadores de control de calidad y métodos de control de calidad de la HFD.

KEY WORDS: blood components, hyperlipemia, identification method, lipid-lowering, UPLC-Q-TOF-MS/MS.

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