The screening study of Chinese patent medicine and Western medicine combination to treatment of ischemic stroke patients based on electronic medical records in China

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Objectives: Chinese Patent Medicine (CPM) is an important product of Traditional Chinese Medicine (TCM) combined with modern technology, this study screening of combined therapy between CPM and Western Medicine (WM) of ischemic stroke patients based on Electronic Medical Records (EMR) in Chinese general hospital. It will provide the basis, evidence for CPM and WM combined application mechanism research, and will provide optimized combined treatment for ischemic stroke in clinical.

Method: Selected 39777 ischemic stroke hospitalized patients' EMR from 15 integrated Hospitals Information System (HIS) in China during 2006-2011. Apply to association rules algorithm screening of commonly used combination treatment between CPM and WM from in drug using records. Combined with professional knowledge to choose CPM and WM combined treatment of ischemic stroke with a higher degree of confidence and conform to clinical practice.

Results: The treatment of ischemic stroke in China general hospital, top 3 of CPM applied were ShuXieTong injection (9015 cases, 22.66%), and Danhong injection (7369 cases, 18.53%), and Xueshuantong injection (5302 cases, 13.33%). Top 3 WM were aspirin (20924 cases, 52.60%), and cinepazide (10771 cases, 27.08%), and insulin (10599 cases, 26.65%). Adopting to association rules algorithm to analysis, CPM and WM is applied to the patients at the same time, it found that the combined treatment of Aspirin (WM) + Ershiwuweizhenzhu pill (CPM) + Danhong injection(CPM) + ShuXieTong injection (CPM) confidence level was 97.05%, and ShuXieTong injection (CPM) + Alprostadil(WM) + Nifedipine (WM) + Aspirin (WM) confidence level was 57.14%.

Conclusion: This research screened the CPM and WM combined treatment of ischemic stroke patients from integrated hospital in China. Top 1 was Aspirin (WM) + Ershiwuweizhenzhu pill (CPM) + Danhong injection (CPM) + ShuXieTong injection (CPM). The main pharmacological effects of anti platelet aggregation, and improve blood circulation, and cell protection, etc., Top 2 CPM and WM combined treatment was a ShuXieTong injection (CPM) + Alprostadil (WM) + Nifedipine (WM) + Aspirin (WM). Its function mainly to improve blood circulation, reduce blood pressure and anti platelet aggregation. Further research will apply to the network pharmacology, and human pharmacokinetics experiment to find the mechanism of CPM and WM combined treatment, in that understands the pharmacology, and toxicology function characteristics. It hopes that these researches can provide safe and effective evidence for CPM and WM combined treatment of ischemic stroke.

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