

The pharmaceutical skill using displacement of protein binding for pharmacists

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In pharmacotherapy, to take pains of patients and to give comforts to patients, pharmacists should improve pharmaceutical skills which have clinical senses of pharmacists containing pharmaceutical investigational outcomes. Without the pharmaceutical skill, pharmacists cannot approach the essence of drug therapies for patients in most urgent full-time for 24 hours. To cope with these drug therapies, we have developed and built the search methods which easily find the diachronic change of protein binding and the factors in serum (= pharmaceutical distribution diagnostic method). This is the pharmaceutical diagnostic method that can speculate diachronic change factors in serum, by monitoring diachronically binding capacities of the drug binding sites on human serum albumin (HSA) and α_1 -acid glycoprotein (AGP) molecules in patient sera (add each site probe to each patient serum, and measure free level of each probe), and considering the binding capacities and values of HSA, AGP, free fatty acids, BUN and CRP which are items of laboratory tests. In addition, the diagnostic method could attempt the effective administration plans by using the protein binding displacement in drugs that have a high protein binding capacity and a small distribution volume, or a high targeting. Here, we explain the outline of the diagnostic method and the case studies (pain control of patients with rheumatoid arthritis) using the diagnostic data.

In future, if pharmacists can master the pharmaceutical skills of protein binding displacement, this must lead to skill up of working pharmacists in cancer therapy, ICT and NST field, because level of HSA and AGP concentrations are remarkably changed by cancer, infection and nutritional status.