

Initial Validation of Diagnostic Criterion of Bronchial Asthma Syndrome

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ABSTRACT **Objective** To initially verify diagnostic efficiency of diagnostic criterion of bronchial asthma syndrome established in this project. **Methods** Foresight research methods was adopted to collect information of 300 cases of bronchial asthma from four grade III, class A hospitals and to establish a database. "Questionnaire of Chinese Medicine Syndrome of Bronchial Asthma Diagnosis" was used to investigate distribution of 10 syndromes in patients, including cold in the exterior and fluid retention syndrome, phlegm-turbid obstruction lung syndrome, phlegm-heat obstructing lung syndrome, wind-phlegm blocking lung syndrome, blood stasis syndrome, lung Qi deficiency syndrome, lung and spleen Qi deficiency syndrome, lung and kidney Qi deficiency syndrome, lung and kidney Yang deficiency syndrome, and sudden loss of Yang-Qi syndrome. At the same time, syndrome differentiation was conducted by experienced Chinese medical experts, and the results from both investigation and clinical experts were compared. Sensitiveness, specificity, accuracy, positive predictive value, negative predictive value, positive likelihood ratio, negative predictive value, and area under the curve were selected as the evaluation indices. **Results** Three hundred questionnaires were distributed and they were all returned back as valid ones. Among them, there were 200 in acute attack, 30 in chronic persistent stage, and 70 in clinical remission. Among 10 common syndromes with sensitiveness range of 78.26% - 98.48%, blood stasis syndrome was with the highest sensitiveness (98.48%) and sudden loss of Yang-Qi syndrome with the lowest sensitiveness (78.26%); the specificity range was 90.64% - 99.15% and blood stasis syndrome was with the highest specificity among them (99.15%); the accuracy range was 90.67% - 99.00% and blood stasis syndrome was with the highest accuracy among them (99.00%); the positive predictive value range was 60.98% - 97.01%; the negative predictive value range was 95.38% - 99.57%; the positive likelihood ratio range was 9.70 - 115.23; and the negative likelihood ratio range was 0.02 - 0.23. The range of area under the curve of receiver operating characteristic was 0.803 - 0.954, and the area under the curve of blood stasis syndrome was the biggest one (0.954), followed by that of phlegm-heat obstructing lung syndrome (0.913) and phlegm-turbid obstruction lung syndrome (0.901). Areas under the curve of lung and kidney Qi deficiency syndrome (0.803) and sudden loss of Yang-Qi syndrome (0.809) were small. **Conclusion** The diagnostic criterion of syndrome of bronchial asthma has good sensitiveness, specificity and accuracy. The diagnostic efficiency of the criterion is better for excess syndromes than for deficiency syndromes. In excess syndrome, blood stasis syndrome is with the best diagnosis efficiency, followed by phlegm-heat obstructing lung syndrome and phlegm-turbid obstruction lung syndrome.

Keywords bronchial asthma; syndrome diagnosis; standard verification

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