TREATMENT OF BRONCHIAL ASTHMA BY SU JOK ACUPUNCTURE

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Among the hands and feet correspondence systems known in the world, the most elaborated correspondence systems and treatment methods employing them were developed by a South-Korean scientist, Professor Park Jae Woo (1987). In a short time, Su Jok therapy, thanks to its effectiveness, has spread and gained recognition worldwide. There are ample data of application of Su Jok therapy for treating internal diseases, but only a rather narrow circle of specialists devoted their research efforts to study the effectiveness of this method in treatment of obstructive lung diseases.

The purpose of our investigation was to clinically assess therapeutic effectiveness of Su Jok acupuncture, to study its influence on bronchial patency, activity of inflammatory processes in the bronchial tree and some indices of the sufractant lung system.

In all, 47 patients with bronchial asthma were investigated between 19 to 58 years old, including 21 men and 26 women. All the patients had a moderate form of the disease in the phase of exacerbation. A three-score scale was used to assess the degree of dyspnoea, frequency of choking fits, nights including, intensity of morning coughing, markedess of rhonchi in the lungs. On the basis of the information obtained the general state of illness was assessed by 4 degrees: asymptomatic, mild, moderate, severe.

Investigation of lung ventilation included determination of the following factors: vital lung capacity (VLC), forced vital capacity (FVC), forced expiratory volume in 1 second (FEV1), peak expiratory flow rate (PEFR), maximal expiratory flow rate under VLC25, 50, 75% (MEFR25, MEFR50, MEFR75). Several patients before and after a course of Su Jok therapy underwent fibrobronchoscopy with bronchoalveolar lavage. Visual assessment of endoscopic picture revealed 3 degrees of inflammatory activities in the tracheobronchial tree. To ensure additional assessment of inflammatory activity and condition of local protective mechanisms a cytological composition of sediment was analyzed.

Clinical analysis showed that before Su Jok therapy was applied all the patients had complaints about shortness of breath and asthmatic attacks of various intensity occuring 1 to 6 times in 24 hours, 1 to 3 nocturnal awakenings because of choking, morning cough productive of sputum, all of them produced dry rhonchi during auscultation. After a 12-day treatment by Su Jok acupuncture the number of acute asthmatic attacks decreased in all patients, fits of wheezing disappeared completely in half of the patients, this being accompanied by absence of dry rhonchi in auscultation. In 31 cases dyspnoeic attacks ceased to bother patients at nights.

After a repeat course in 29 patients (of 47) dyspnoea or wheezing fits subsided; in 38 patients nocturnal awakenings due to wheezing fits stopped, and in 33 patients rhonchi were not ausculted.
The aforementioned improvements were strictly recorded with quantitative assessment of symptoms: markedness of all symptoms decreased reliably by 75 to 85% (Table 1). Along with high effectiveness of Su Jok acupuncture its good tolerance, none of the patients had any side effects after the treatment.

Symptoms	Initial index	After 1st course	After 2nd course	Index shift
Markedness of dyspnoea	1,97±0,11	1,231 ±0,11*	0,79 ±0,08*	-85,0%
Frequency of attacks	2,55±0,14	1,19 ±0,12*	0,84 ±0,08*	-84,0%
Nocturnal wheezing fits	2,5±0,14	1,28 ±0,14*	0,89 ±0,10*	81,0%
Intensity of morning cough	2,55±0,11	1,52 ±0,21*	1,01 ±0,09*	-75,7%
Rhonchi	1,86±0,1	1,12 ±0,10*	0,74 ±0,08*	-82,9%
General assessment of severity of disease	2,67±0,10	1,62 ±0,11*	1,04 ±0,09*	-75,6%

Note: here and further * - reliable difference from the initial index

Table 1. *Clinical assessment of effectiveness of Su Jok acupuncture in patients with bronchial asthma (in scores •±•)*

Favourable changes in the course of the disease were confirmed by investigation of ventilation indices. While before the treatment they were moderately low, within 12 days of treatment they showed a high certainty increase, and after a repeat course they increased still more (Table 2).

Symptoms	Initial index	After 1st course	After 2nd course	Index growth
VLC, % of basic	74,2±2,60	89,2±3,23*	91,1±2,95*	+23,4%
FVC, % of basic	70,4±2,94	85,5±3,58*	88,1±2,68*	+25,8%
FEV1, % of basic	62,2±3,78	82,6±4,57*	83,9±4,31*	+35,7%
PEFR, %	52,7±4,00	72,2±4,79*	85,9±4,38*	+64,1%
MEFR25, %	46,8±5,39	68,2±5,90*	67,4±5,90*	+44,9%
MEFR50, %	42,5±5,75	59,5±5,83*	61,2±6,56*	+45,0%
MEFR75, %	44,4±6,00	72,5±6,76*	68,3±6,71*	+54,9%

Table 2. *Ventilation indices in patients with bronchial asthma treated by Su Jok acupuncture (•±•)*

Especially pronounced was the growth of flow rate indices, namely, PEFR by 64.1% ($p<0.001$), MEFR25, MEFR50, MEFR75, ($p<0.001$) which confirmed the improvement of bronchial patency on all levels. VLC increased reliably, too. Therefore, under the influence of Su Jok acupuncture the indices of the external breathing function have improved considerably, reaching lower limits of the norm.
Before treatment seven patients underwent fibrobronchoscopy under local anaesthesia with bronchial tree lavage. In six of them, diffuse bilateral catarrhal or catarrhal-purulent endobronchitis was revealed of II (in 3 patients) and I (in 3 patients) degree of intensity with marked hyperemia and oedema of the mucus of the bronchial tree, moderate mucous or mucopurulent viscid secretion in the lumen. Cytological study confirmed active inflammaroty process in the bronchial tree (great number of neutrophilic leukocytes and eosinophils). This was accompanied by suppression of local protective mechanisms of the airways to which testified a low content of alveolar macrophages (Table 3).

Indices	Initial index	After 2 courses of treatment
Alveolar macrophages, %	71,2±2,17	84,6±1,86*
Neutrophils, %	19,9±6,23	12,3±1,58*
Eosinophils, %	6,70±1,70	1,72±0,53*
Lymphocytes, %	4,36±1,77	1,22±0,53

Table 3. *Change of cytological composition in patients with bronchial asthma under the influence of Su Jok acupuncture (•±•)*

After Su Jok acupuncture treatment there was a pronounced positive endoscopic dynamic: hyperemia and mucous oedema dicreased, pathological secretion was practically absent. Only in 4 patients diffuse endobronchitis of I degree of inflammatory intensity was revealed. Inflammatory reduction in the bronchi was clearly confirmed by lavage liquid check which showed considerable decrease of eosinophilic number (from 6.79±2.35 to 1.72±0.53; $p>0.01$) and neutrophils (from 19.9±2.35 to 12.28±1.58; $p<0.02$), simultaneously the number of alveolar macrophages increased (from 71,2±2,17 to 84.6±1.86; $p<0.001$).
Therefore, our investigation demonstrated that Su Jok acupuncture is an effective and well tolerated method in a complex treatment of patients with bronchial asthma. Under the influence of Su Jok acupuncture, along with cesation or reduction of the number of wheezing fits and nocturnal episodes, bronchial patency considerably improved in asthmatic victims. It is noteworthy, that the chosen method is simple to administer, does not require additional expenditures. It can be recommended for wide application in treatment of bronchial asthma.