

## SHORT COMMUNICATION

**Pulmonary function in patients with Sjögren's syndrome**

Panchovska M, Simidchiev A, Sheitanov Y

*Clinic of Rheumatology, Medical University, Sofia, Bulgaria. mar\_pan@abv.bg***Abstract**

The primary Sjögren's syndrome is a chronic inflammatory autoimmune disease of the exocrine glands with various glandular and extraglandular (systemic) manifestations. Changes in exocrine function of glands — including bronchial, should influence the frequency of pulmonary affecting, hence functional disorders as well. Examining some standard parameters of pulmonary function can often give valuable information about pulmonary alterations. The lack of typical alterations in pulmonary function in patients with primary Sjögren's syndrome, found by us, gives good reason to express the supposition that pulmonary engagement with this disease is insignificant in the majority of cases. (Tab. 1, Ref. 7.)

**Key words:** primary Sjögren's syndrome, pulmonary function.

Examining some standard parameters of pulmonary function can often give valuable information about pulmonary alterations with a number of diseases. Not infrequently though, concurrently existing processes, different from pathophysiological point of view, like emphysema and fibrosis, developing in a patient, cannot be adequately estimated by means of „external breathing“ examination only. In cases like this, measuring total lung capacity, residual volume and respiratory tract resistance considerably adds to the diagnostic usefulness of pulmonary function examination.

**Aim of the study**

To analyze alterations in pulmonary function in patients with primary Sjögren's syndrome.

**Material and methods**

25 patients with diagnosed primary Sjögren's syndrome on the basis of European criteria were examined. Functional examination of breathing of all patients was performed: static and dynamic lung volumes, volume debit curve and respiratory tract resistance. Examination was made with all-body plethysmograph (Compact Lab Jaeger, Germany), with the examiners not being familiar with patients' clinic data. Methods and foreseen values of the European Pulmonary Disease Association (1) were used.

**Results**

Table 1 below shows the results from pulmonary function study in patients.

When comparing clinically established changes by means of pulmonary function examination, we found the following (Mann–Whitney U test):

— In cases of *affecting parotid gland* (11 patients – 44 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (14 patients) p=N.S.

— In cases of *roentgenologically established fibrosis* (13 patients – 52 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (12 patients) p=N.S.

— In cases of *neurological symptoms* (10 patients – 40 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (15 patients) p=N.S.

— In cases of *Raynaud's syndrome* (17 patients – 68 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (8 patients) p=N.S.

Clinic of Rheumatology, Medical University, Sofia, Bulgaria, and Clinic of Pulmonology, Medical University, Sofia, Bulgaria

**Address for correspondence:** M. Panchovska, P.O. Box 136, 4023 Plovdiv, Bulgaria.

**Tab. 1. The results from pulmonary function study in patients.**

n=25	Average deviation	Standard	Minimum	Maximum
Age (years)	56.7	10.1	35.0	73.0
Height (m)	1.5	90.0	71.4	81.80
Weight (kg)	66.9	12.3	50.0	104.0
VC %	109.9	20.0	74.8	145.7
FEV <sub>1</sub> %	110.4	16.0	76.5	137.5
Tiff	85.2	6.7	70.1	100.0
MMEF %	102.5	30.9	53.6	190.0
TLC %	101.7	11.9	83.0	121.4
RV %	103.2	20.8	69.2	148.1
RV/TLC %	38.7	8.9	26.5	56.8

— In cases of *dry cough* (16 patients), pulmonary function does not differ from the standard or from pulmonary function with patients without such (9 patients)  $p=N.S.$

— In cases of *asthma* (8 patients – 32 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (17 patients)  $p=N.S.$

— In cases of *bronchial spasm* (2 patients – 8 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (23 patients)  $p=N.S.$

— Depending on the *length of the period of disorder*, in cases of length of disease up to 5 years (18 patients), pulmonary function does not differ from pulmonary function with patients with longer period of disorder (7 patients)  $p=N.S.$  Residual volume is the only feature tending to increase in the group with longer period of disorder (4 out of 7 have  $RV>120\%$  vs 2 out of 18 in the group with shorter period of disorder), but alterations do not reach statistical significance.

— In cases of *symptoms on the part of gastro-intestinal tract* (18 patients – 72 %), pulmonary function does not differ from pulmonary function with patients without such (7 patients)  $p=N.S.$

— In cases of *arthralgia* (20 patients – 80 %), pulmonary function does not differ from the standard or from pulmonary function with patients without such (5 patients)  $p=N.S.$

**Comment:** There is relatively little evidence in literature of pulmonary function alteration in cases of Sjögren's syndrome (2–4). Changes in exocrine function of glands – including bronchial, should influence the frequency of pulmonary affecting, hence functional disorders as well. Relatively high frequency of

roentgenological alterations (5–7) leads to probable pulmonary function alteration, too. More than half of the patients in our study had anamnestic (cough and asthma) or/and roentgenological (fibrosis) evidence of pulmonary engaging, but no difference in lung function was observed with this clinical data, regarding the group without manifested symptoms, as well as regarding foreseen parameters of corresponding anthropometric equivalents. The lack of typical alterations in pulmonary function in patients with Sjögren' syndrome, found by us, gives good reason to express the supposition that pulmonary engaging with this disease is insignificant in the majority of cases. This fact indicates that it is not necessary to perform expensive, complex examinations of lungs with these patients, except for the cases of clinically manifested disorder (concurrent manifestation of anamnestic, physical and roentgenological evidence of affecting).

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