

The rate of disability in patients with ankylosing spondylitis, correction of therapy with using a drug test

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Ankylosing spondylitis is one of the rheumatological diseases most often leading to disability in patients.

According to E.R. Agababova (1997), 30% of patients with AS receive a disability group. At the same time, a significant part of the disabled are persons under the age of 30. The prevalence of AS, according to statistics, is 1: 200 of the adult population - 0.05% (Siepar J, 2002). However, the true prevalence appears to be higher. It is obvious that the disability of patients is not only social, but also economic in nature.

Thus, the study of predictors of disability in patients with AS is highly relevant. The aim of our study was to study patients with AS at an early stage of the disease, to isolate markers indicating a more severe course of the disease, the rate of disability in this disease, and correction of therapy using a drug test.

86 patients with AS were studied. Of these, 70 were men, 16 were women. The average age of the patients was  $28 \pm 4.3$  years. The study period lasted 6 years. Disability received 54 patients (63%), without disability - 32 patients. Concomitant diseases were present in 3% of patients (cholecystitis, chronic gastritis, mitral valve prolapse).

72% of patients with ankylosing spondyloarthritis from the total number of disabled people (56) received a disability group after 3 years from the onset of the disease, 22% of patients became disabled before 3 years from the onset of AS.

Early disability is associated with high AS activity, acute onset of the disease. Disability after 3 years from the onset of AS is associated with the chronization of the process, the progression of the disease, the ineffectiveness of NSAIDs (Badokin V.V., 2001), the course of AS under the guise of other diseases (Ward DD, 1999). Late diagnosis of AS leads to late prescription of therapy for the disease, which leads to chronicity of the process and subsequent disability.

According to our data, an acute onset was observed in 37.2% of patients with disabilities and in 3.5% without it ( $p = 0.009$ ). The systemic lesion was detected in 45.3% of disabled people and in 4.7% of patients without disabilities ( $p = 0.005$ ), the third X-ray stage was detected in 30.2% of patients with disabilities and in 9.3% without it (0.0048). The most common variant of joint damage in patients with disabilities is classic - 44.2%, and in patients without disabilities - lumboischialgic - 20.9% (Table 1).

The activity of the II degree process was diagnosed in disabled people in 39.5% of cases, without disability - in 3.4% of cases. Degree II dysfunction when comparing groups with and without disabilities turned out to be statistically insignificant (44.1% and 23.3%,  $p > 0.05$ ).

The course of AS in the first 36 months led to disability in 14 people (16.3%), of which 9 people received the III disability group, 5 people - the II group. In 11 patients (12.3%), persistent disability was detected within 12 months, of which 5 people received group II, 6 - III group of disability.

In patients with early disabilities, the acute onset of AS with early extra-articular manifestations prevailed (47.7%), the ESR level reached 30 mm / h or more, dysproteinemia and an increase in the proteins of the acute phase were characteristic. All patients had pronounced functional joint failure. Self-service was especially difficult, walking up the stairs. The BASFI daily activity index was higher than 4, the BASDAI index was also higher than 4, which indicated a high disease activity. When assessing pain on the VAS scale, the numbers reached 5.

Among the patients who received disability in the early stages, the classic variant (11 patients out of 14) of the disease onset prevailed. Disease

Table 1  
Comparative characteristics of AS patients with different periods of disability establishment

Gr.	Activity			NF			Debut			Consistency		Start
	I	II	III	I	II	III	To	l	with	+	-	Sharp. Fast.
one	29	3	-	12	twenty	-	fourteen	18	-	4	28	3 29
%	26.7	3.5		13.9	23.3		16.3	20.9		4.7	32.6	3.5 33.7
2	-	eight	3	2	eight	one	nine	-	2	7	4	8 3
%	-	9.3	3.5	2,3	9.3	1.7	10.5	-	2,3	8.1	4.7	9.3 3.4
3	17	23	-	eleven	26	2	26	7	7	32	8	22 18
%	19.8	27.3	-	18.7	44.2	16.3	44.2	8.1	8.1	37.2	9.3	25.6 20.9

Group 1 - patients without disabilities (n = 32).

Group 2 - disability for the first 12 months. AC (n = 11).

Group 3 - disability more than 3 years AS (n = 40).

k - classic version of AS, l - lumboischialgic, c - articular

manifested itself as a lesion of the spine, stiffness, the presence of pain of inflammatory genesis in the spine, lumbosacral region. Three people from the group of patients with early disability had an articular variant of the onset of AS, which was manifested by pain in the peripheral joints (knee, hip, shoulder), enthesitis.

In this group, 13 patients were men under the age of 30, 9 of them were manual workers. 11 patients in this group smoked. A burdened history of joint diseases had 3 patients. The provoking factors in 2/3 of the patients were a combination of heavy physical labor and spinal trauma.

Examination of the heart and great vessels revealed disturbances in the rhythm and conduction of the heart in 50% of patients (bradycardia, tachycardia, pacemaker migration, extrasystole, atrial fibrillation, bundle branch block, abnormal AV conduction). The defeat of the aorta was detected in 30% of patients (increased echogenicity of the aortic root, aortic valve, enlargement of the aortic root).

No violations of the bronchopulmonary apparatus were revealed during the first year of observation. All patients received treatment with NSAIDs, muscle relaxants in standard doses, exercise therapy, physiotherapy procedures. Basic therapy was carried out in 6 patients.

Against the background of ongoing therapy, 2 patients were diagnosed with erosive gastritis, which required the appointment of omeprazole and temporary discontinuation of diclofenac.

Of 14 patients who received a disability group during the first year of illness, 11 at the time of discharge from the hospital had ESR above 30 mm / hour, pain in the joints due to physical activity. In this group of patients, increased fatigue, poor sleep, and anxiety for the future persisted, which is consistent with the literature data (Ward DD, 1999).

To improve the effectiveness of the therapy, a drug test was carried out, allowing the patient to choose the therapy taking into account the sensitivity and side effects. In a group of 19 patients, individual selection of drugs was performed using the ART method. The effectiveness of treatment in that group was 22% higher, side effects - 18% less, and the subsequent withdrawal of medications led to the relief of pain from the gastrointestinal tract, depressive syndrome.

We found that in the early stages of the disease, disability up to a year occurs in 11.6% of patients, the main group of patients gets disability for this disease in the late stages of 25.6%. Late periods of disability are associated with late access to medical care by patients (37.5%), misdiagnosis (45.5%). In this connection, an algorithm for optimizing diagnostics of the early period of AO is proposed.

At the first stage of the diagnostic examination, attention is paid to complaints of a nonspecific nature, which long (5%) precede the appearance of characteristic symptoms: progressive weakness, easy fatigue, loss of appetite, sweating, weight loss, subfibrillation.

Risk factors include unfavorable working conditions (70%), previous infections (25%), spinal trauma (12.5%), hypothermia (5%), emotional stress (5%), excessive insolation (2.5%), heredity (2.5%).

At the second stage of diagnosis, the localization of pain is determined, which was observed in 17.6% of cases in the first month and in 77.5% - in the first year of the disease. The pain intensifies in the early morning hours and at night, decreases in the afternoon. Pain is localized in the region of the sacrum, buttocks, ilio-sacral joint. Radicular pain without neurological symptoms is noted. Shingles chest pain appears at the beginning of the year in 4.8% of those observed and in 45% of patients at the end of the first year.

An early manifestation of AS in young people was pain in the heels, peripheral arthritis with damage to the shoulder and hip joints. The frequency of occurrence of these signs of AS by the end of the first year of the disease was 18.8% of cases in the patients we examined. In addition, in the early stages, a limitation of the chest excursion (less than 2.5 cm) and a decrease in the mobility of the cervical and thoracic spine in 3 planes were revealed.

The onset of the disease in severe cases was presented by the classical variant (47%), with a less severe course - by the lumboischialgic variant (26%), with the minimal severity of the disease - by the articular variant (12%). 15% of the patients examined by us at the onset of AS had a combined lesion of the musculoskeletal system.

In 3.2% of cases, one of the extra-articular manifestations of the onset of the disease may be anterior uveitis. Sometimes it precedes joint damage.

The third stage of diagnosis - laboratory, including x-ray and immunological research. X-ray diagnosis is confirmed in 6.3% in the first month and in 60% of cases in the first year. CT and MRI can detect changes in the sacroiliac region in the early stages.

An increase in the accumulation of technetium pyrophosphate is noted in the initial sacroiliitis before the manifestation of radiological changes.

Another reliable marker of AC is the detection of HLA B 27. According to N.A. Mukhina (2001), the occurrence of HLA B 27 in AS exceeds 90%. In our study, the incidence of HLAB 27 ranged from 6.3% in the first month of illness and 37.5% at the end of the first year.

The detection of this antigen is important for early diagnosis and prognosis of a severe course of the disease in young men with insufficient information content of radiological data (Mukhin N.A., Moiseev V.I., 2001; Vanshtein B., 2005).

#### Conclusion:

1. Predictors of severe AS with the possibility of disability in the first year diseases are:

- acute onset of the process;
- systemic lesion;
- clinical and laboratory activity;
- a high degree of functional impairment;
- ineffectiveness of NSAIDs;
- the classic version of the onset of the disease.

2. For the prevention of drug complications of the applied therapy should be carried out drug testing of drugs by the ART method.

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