

DEPARTMENT OF RHEUMATOLOGY AND NEPHROLOGY

171. SARCOPENIA ON PATIENTS WITH AUTOIMMUNE DISEASES

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Introduction. The European Working Group on Sarcopenia in Older People(EWGSOP) developed a clinical definition for sarcopenia as a syndrome which affects at the same time muscle mass, muscle strength and physical function. Sarcopenia appears from the imbalance between the hormonal and immunological changes that occur during the aging process. The autoimmune diseases cause the appearance of sarcopenia by increasing cytokines (TNF- α tumor necrosis factor and IL-6 interleukin-6, which play an important role in the loss of muscle mass) and inflammation in the body.

Aim of the study. The Aim of this study is to evaluate the sarcopenia of the patients with the autoimmune disease from rheumatology department.

Materials and methods. A prospective, pure observational and non-interventional study was conducted which included 17 patients with autoimmune diseases admitted in the rheumatology department of Country Hospital of Targu Mures, Romania. The muscle mass was evaluated ultrasonographic for a 5-day period (day 1 and day 5) at biceps brachii (BB) and rectus femoris (RF) muscles, the physical function was evaluated with 400 meter walk test (sarcopenic if $<0,8\text{m/s}$) and the muscle strength was evaluated with chair stand test (sarcopenic if $>15\text{s}$) which measures the time needed for every patient to rise and seated for five times. The SarQoL questionnaire was used to assess quality of life of sarcopenic patients. The statistical analysis was assessed with GraphPad Prism 6 and Microsoft Office Excel package.

Results. The mean age of the patients were 55 years old. The autoimmune diseases studied were systemic lupus erythematosus, rheumatoid arthritis, systemic sclerosis and ankylosing spondylitis with a mean age of disease of 8 years. 88% of patients can be considered sarcopenic with a mean 400 meter walk test of $0,575\text{ m/s}$ and a mean of chair stand test of $22,17\text{s}$. Ultrasonographic determinations showed a mean BB of day 1 vs day 2 of $5,07/5,04\text{ cm}^2$ and RF of day 1 vs day 2 $1,94/1,78\text{ cm}^2$ with no statistical difference between the measurement days ($p=0,06-0,94$). A higher difference was observed at the RF($p=0,06-0,3$) vs BB($p=0,43-0,91$). The SarQoL questionnaire showed a mean result of 48.75 (cut-off point 70).

Conclusions. In conclusion sarcopenia is very common in patients with autoimmune diseases, having also a big impact in patients quality of life.

Key words: autoimmune diseases, sarcopenia, ultrasonography

172. ULTRASONOGRAPHIC INTRA-INTER-VARIABILITY ON PATIENTS WITH SARCOPENIA AND AUTOIMMUNE DISEASES

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Introduction. Sarcopenia is a muscle disease, which affect the muscle mass, strength and the physical performance at the older patients. Ultrasound is a new research and accurate technique for measure the muscle mass and quantity. The use of ultrasound was recently approved for diagnosis of sarcopenia.

Aim of the study. The aim of this study is to evaluate intra and inter-variability for ultrasonographic measured areas of biceps brachii (BB), rectus femoris (RF) and the diaphragm (DF) end- expiratory and maximum-inspiratory.

Materials and methods. The study included 17 patients with autoimmune disease of rheumatology department of County Hospital of Targu Mures, Romania. They were ultrasonographic evaluated for a 5-day period (day 1 and day 5) on the biceps brachii, rectus femoris and diaphragm DF (end- expiratory and maximum inspiratory) muscle to identify the intra- inter-variability between the two operators. The study is a prospective, pure observational, non-interventional and the statistical analysis was perform with Microsoft Office Excel package, GraphPad Prism 6 and SPSS. Intraclass correlation coefficient (ICC) was considered statistically significant if $ICC > 0,7$.

Results. ICC proves good inter-observer variability (P&W2009) at the following levels: BB right assessment 1 and 2 (0,755/0,847 $p < 0,0001$), BB left assessment 1 and 2 (0,8/0,818 $p < 0,0001$), RF right assessment 1 and 2 (0,858/0,927 $p < 0,0001$), RF left assessment 1 and 2 (0,89/0,77 $p < 0,0001$). Poor results were found on the diaphragm investigation: DF end-expiratory evaluation 1 and 2 (0,42/0,65 $p < 0,0001$), DF maximum inspiratory evaluation 1 and 2 (0,32/0,608 $p < 0,0001$). Regarding the intra-reliability we obtain good statistically significant results on the level of BB right 0,86, RF right 0,78 and RF left 0,78.

Conclusions. In conclusion biceps brachii and rectus femoris ultrasound showed a good inter-intra variability and the results revealed a ultrasonographic skill improvement from day 1 to day 5.

Key words: Sarcopenia, ultrasonographic, Intraclass correlation coefficient

173. PARASITES AND MUSCULOSKELETAL SYSTEM

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Introduction. Musculoskeletal impairment in parasitic infections are rare diseases more found in tropical countries. With the migration and seasonal travel of the population, many diseases considered exotic are becoming frequent in our country. In Republic of Moldova, musculoskeletal disorders have been observed in infections caused by *Toxocara canis*, *Giardia lamblia* and *Echinococcus granulosus*. Although a large number of clinical cases of locomotor system involvement in parasitic infections are described in the literature, systematic researches are lacking in this field.

Aim of the study. To analyse particularities of musculoskeletal impairment in parasitic infections.

Materials and methods. We included in our study 40 patients with musculoskeletal disorders who were diagnosed positively with different parasites (*toxocara canis* (18 subjects), *toxocara cati* (4), *echinococcus granulosus* (10), *giardia intestinalis* (4), *ascaris lumbricoides* (2) and 2