

Kulachek V.T.

**THE MORPHOFUNCTIONAL STATUS OF ERYTHROCYTES IN PATIENTS WITH
CHRONIC KIDNEY DISEASE AND RHEUMATOID ARTHRITIS**

*Department of Internal Medicine
Bukovinian State Medical University*

Rheumatoid arthritis (RA) is a chronic crippling disease that can affect various organ systems including the kidney. Renal involvement in RA is clinically meaningful because it worsens the course of primary disease and increases mortality. Subjects hospitalized for RA are significantly more likely to have a recorded cause of death due to renal failure. Proteinuria may be the first clinical sign in many renal disorders, for example, in amyloidosis patients. Erythrocytes, in addition to oxygen transport function, occupy a prominent place in the regulatory exchange processes in the body, providing microcirculation of organs and tissues, in particular, the kidneys.

The aim: to study morphofunctional properties of erythrocytes at different stages of evolution of chronic kidney disease (CKD) in patients with RA. The study involved 113 patients with RA II-III degree of activity. According to a survey of patients were divided into four groups (I-patients with RA without renal disease (n=20), II-patients with RA with CKD stage I (n=34), III-patients with RA with the presence of CKD stage II (n=31), IV-patients with RA with the presence of CKD stage III (n=28). Comparison group was 20 healthy individuals. The index of erythrocytes deformability, the relative viscosity of the erythrocyte suspension (RVES), and the peroxide hemolysis of red blood cells (PGE) were studied in addition to conventional laboratorial tests.

The progressive violations of the morphofunctional properties of erythrocytes in patients with rheumatoid arthritis with CKD I-III are determined. It has been found a significant decrease of the erythrocyte deformability index ($p < 0,05$) and the increase of the RVES ($p < 0,05$). It has been found the direct correlation between the RVES and the proteinuria ($r = 0,87$), the inverse correlation between the RVES and the glomerular filtration rate ($r = -0,71$) ($p < 0,05$). PGE increased in patients with RA with the presence of CKD and its growth stage. Glomerular filtration rate and RVES can be interdependent processes that reinforce each other. Thus, the increasing of RVES promotes the formation of microthrombi in the glomeruli capillaries, impairs filtration and contributes to the progression of kidney damage and the development of CKD. At the same time, decreased GFR indirectly causes a deterioration in the rheological blood properties and an RVES increase in the glomeruli and accelerates the progression of impaired renal function.

Thus, analyzing the overall change in the morphofunctional properties of erythrocytes, it has been found that the indicators of RVES and PGE significantly increase with the presence of RA, but with the advent of kidney damage, changes are becoming progressive. Indicators of the erythrocyte deformability index are reduced in patients with RA with involvement in the pathological process of the kidneys, which can be regarded as one of the methods of early kidney damage in this category of patients. The most severe microcirculatory changes were found in patients with RA with CKD III stage. These findings indicate the important role of microcirculatory disorders in this category of patients and the necessity of their correction.

Kulich N.M.

**EMOTIONAL INTELLIGENCE
AS A PSYCHOLOGICAL RESOURCE OF SPORTSMEN**

*Department of Emergency and Military Medicine
Bukovinian State Medical University*

Training programmes for athletes that are solely based on the technical and physical aspects of training have their limitations. It is only when they are also based on a proper understanding of psychology of an athlete that sportsmen and women can attain their true potential. In practical terms this means that when a sports trainer is devising a training programme for an athlete the trainer needs to recognise that the unique psychology of an individual athlete is a resource that can be used to boost the athlete's performance.

Emotional intelligence (EI) is an important part of psychology of an athlete and must therefore be taken into account when a training programme for an athlete is being devised.

Modern research into psychological training in sports raises the issue of how athlete's psychology can be used as a resource.

The need to counteract the wide range of stress factors that often arise during training and competition presents a range of challenges that an athlete's character must overcome. For example, athletes can only obtain good results in sport by adapting to high training loads and to constant competition. This demands a complex set of personal resources and qualities in an athlete.

Theoretical analysis offers many insights into how best to form and shape the personal resources of an athlete. The literature on the subject is extensive and much of it is overlapping. Nevertheless, it seems from the written materials that there are four main resources. They are motivational, cognitive, behavioural and emotional. Emotional stability, confidence and motivation, dedication, optimism, and the ability to control aggression, anxiety, the ability to concentrate and high self-esteem and the importance of having a stable psychological profile are closely linked to or are subsets of the four main resources.

The aim of this research paper is to determine the impact of physical activity on the level of EI among youth; examine the extent to which EI and sports achievements is correlated; and consider the discrepancies between EI indicators between athletes in different sport disciplines.

In essence the literature on the subject emphasizes the need for careful research into the psychological resources of an athlete. It also argues that those resources will differ from one athlete to another. The versatile use of the emotional resource capabilities of an athlete's psyche effectively increases their ability to embody their sports potential in competitions. Harnessing EI has the potential for improving an athlete's emotional resources.

In the paper, the EI of 245 young people aged 17-19 was studied. 125 of them were athletes who were systematically engaged in sports and competitions for 3½ years. The remaining 120 ones did not go into sport at all. The research is based on the methodology that Nelson-Hall devised to assess EI. It also uses various methods of mathematical statistical analysis, such as Student's t-test.

The paper shows that the extent of the development of EI in young athletes was significantly higher than that in their peers who had not done any sports. Thus, sports activities have a positive effect on the development of young people's EI.

It is clear from this finding that EI plays an important role in shaping an athlete's psychological profile. Another key finding is that in a group of athletes the results and analysis of the components of EI in a group of athletes, statistically significant differences were found in EI between athletes in the group. This was shown in the indices that measured how well they were able to manage their own emotions, their degree of self-motivation and in the extent to which they were aware of other people's emotions. The research showed that athletes with higher levels of emotional management tend to achieve better results than those with lower emotional management abilities. It is likely that this observation will hold true for athletes from across a broad spectrum of sports ability.

Kvasnytska O.B.

MODERN APPROACHES IN THE PREVENTION OF COLON CANCER

Department of Internal Medicine

Bukovinian State Medical University

Colorectal cancer (CRC) is one of the most widespread pathology in the world. Every year in the world, the incidence reaches 1 million cases, and the annual mortality rate exceeds 500,000. and ranks second in mortality after malignant neoplasms among men and women. The incidence of CRC in European countries is 26-46 men and 17-28 women per 100,000 (in Ukraine, an average of 17-21 cases). It is more often found at the age of 60 years and more, but it is diagnosed only in 6% of cases in people aged 50 and less. In 95% of cases, CRC arises from adenomas of the colon, less often develops in patients with genetically determined polyposis syndrome or inflammatory bowel diseases (IBD).