

## POSSIBILITY OF USING BIOCHEMICAL AND HEMATOLOGICAL PARAMETERS IN EVALUATING ADNEXAL MASSES

Aleksandra Petrić<sup>1,2</sup>, Radomir Živadinović<sup>1,2</sup>, Dejan Mitić<sup>1,2</sup>, Predrag Vukomanović<sup>1,2</sup>,  
Jelena Milošević<sup>1,2</sup>, Aleksandar Živadinović<sup>2</sup>

<sup>1</sup>University of Niš, Faculty of Medicine, Niš, Serbia

<sup>2</sup>University Clinical Center Niš, Clinic for Gynecology and Obstetrics, Niš, Serbia

Contact: Aleksandra Petrić  
3/17 Lole Ribara Str., 18000 Niš, Serbia  
E-mail: sanja.petric@hotmail.com

Current diagnostic approach to adnexal masses (medical history, clinical examination, transvaginal sonography, tumour markers) does not provide an accurate prediction for potential malignancy. There is a possibility of using hematological and biochemical parameters (platelets count, neutrophil/lymphocyte ratio, platelet/lymphocyte ratio, platelet distribution width, level of C-reactive protein) in predicting ovarian malignancy. A retrospective study was conducted. Analysis of aforementioned parameters was performed in patients with histopathologically verified benign/malignant ovarian tumours. CRP levels, total count of granulocytes, and total count of platelets were statistically significantly higher in patients with malignant changes ( $p < 0.001$ ,  $p = 0,001$ , or  $p = 0.023$ ). Total lymphocytes count was statistically significantly lower in patients with malignant changes ( $p < 0.001$ ). Platelet count was statistically significantly higher in patients with stage III ( $p = 0.011$ ). PL/LY ratio was statistically significantly higher in patients with stage III ( $p = 0.043$ ). CRP was statistically significantly higher in stage III ( $p < 0.001$ ). Lymphocyte count was statistically significantly lower in stage III ( $p < 0.001$ ), and granulocyte count was statistically significantly higher in stage III ( $p = 0.001$ ). Platelet count was statistically significantly higher in stage III ( $p = 0.001$ ). MPV was statistically significantly lower in stage III ( $p = 0.031$ ). PL/Ly ratio was statistically significantly higher in patients with stage III ( $p = 0.044$ ). Analyzed biochemical and hematological parameters are of limited utility in differentiating benign from malignant ovarian masses. Elevated levels of C-reactive protein, neutrophils and platelets suggest potentially malignant ovarian masses. Analyzed biochemical parameter (high levels of C-reactive protein, reduced lymphocyte count, increased granulocyte count, increased platelet count, increased PLR, as well as lower MPV values) may suggest advanced malignancy.

*Acta Medica Medianae 2021;60(4):23-29.*

**Key words:** ovarian tumours, biochemical, hematological parameter