

Usefulness of hematological parameters for differential diagnosis of endometriomas in adolescents/young adults and older women.

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Abstract

Background Inflammatory processes have been considered to be involved in the pathogenesis of endometriosis. However, the predictive role of inflammatory hematological parameters in endometriosis is not clear. The aim of this study was to analyze the clinical value of hematologic markers in the differential diagnosis of endometriomas in younger and older reproductive age women. **Materials and methods** A retrospective chart review was done for 502 patients who underwent surgery: 267 with endometriomas (endometrioma group) and 235 with other benign adnexal cysts (control group). Patients were placed into subgroups as younger (adolescents/young adults, aged <25 years) and older (aged ≥25 years) women. Total and differential white blood cell count, neutrophil-to-lymphocyte ratio, platelet indices and platelet-to-lymphocyte ratio (PLR) were evaluated with receiver operating characteristic curve analysis for differential diagnosis of endometriomas. **Results** The mean serum levels of PLR, plateletcrit (PCT), platelet count and CA-125 (reference range below 35 IU/mL) were significantly higher in the endometrioma group ($p < 0.001$). The area under the curve (AUC) for CA-125 was 0.85 [95% confidence interval (CI), 0.82-0.88] ($p < 0.001$) for the entire group. However, platelet count, PLR, and PCT showed poor discriminative ability for detecting endometriomas with AUC values of 0.59 (95% CI, 0.55-0.65, $p < 0.001$), 0.58 (95% CI, 0.53-0.63, $p = 0.002$) and 0.61 (95% CI, 0.56-0.66, $p < 0.001$), respectively. In age-stratified analysis, these platelet indices had also low diagnostic performance in both age groups. **Conclusions** Hematologic markers do not adequately differentiate ovarian endometriomas from other benign cysts in neither adolescents/young adults nor older women.

KEYWORDS:

adolescents; endometrioma; lymphocyte; neutrophil; platelet