The role of neutrophil-to-lymphocyte ratio in determining the need for surgical intervention in the treatment of intussusception in children

G Gerçel, B Murat, F Ersoy, M Çağlar,Ç Ulukaya Durakbaşa

Istanbul Medeniyet University, Faculty of Medicine, Department of Pediatric Surgery

AIM: To evaluate the effectiveness of laboratory tests in determining the need for surgical intervention in cases of intussusception

METHOD: Retrospective screening including 2007-2021

- **Group A:** Those undergoing hydrostatic reduction (HR) or reduction without intervention
- **Group B:** Operated after unsuccessful HR and/or without attempted HR
- Between groups: Hemoglobin, leukocyte, platelet, neutrophil, lymphocyte and CRP values, neutrophil-to-lymphocyte ratio (NLR), lymphocyte-CRP ratio (LCR) and platelet-to-lymphocyte ratio (PLR) were compared.
- Statistics: Chi-square test and independent t-test, $p<0.05$ significant

RESULTS:

158 patients (Figure);

-100 males (63.3%)

-58 females (36.7%)

Median age:

20.5 (28 days-16 years) months

Group A – Group B

No significant difference between hemoglobin, leukocyte, neutrophil, lymphocyte values, LCR, PLR values ($p > 0.05$)

Group B

Platelet values are significantly elevated (0.031; $p<0.05$)

NLR value is significantly higher (0.032; $p<0.05$)

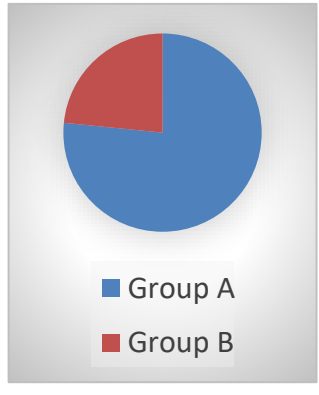

Figure:

Group A (n=121, 76.6%)

Group B (n=37, 23.4%)

CONCLUSION:

- Platelet and NLR levels were elevated in patients who underwent surgery for intussusception
- NLR, an indicator of intestinal inflammation, may be considered a potential marker for predicting the need for surgical intervention in intussusception cases