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EVALUATION OF PAN IMMUN INFLAMMATORY VALUE AS A PREDICTIVE DIAGNOSTIC TOOL IN NECROTISING ENTEROCOLITIS

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INTRODUCTION

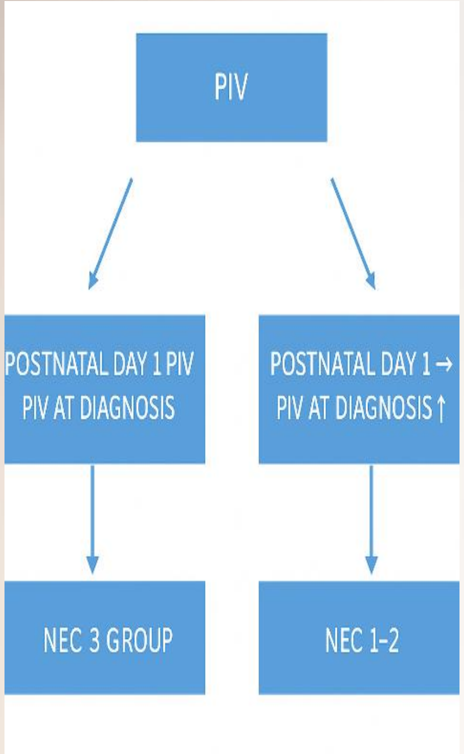
Necrotizing enterocolitis (NEC) is a gastrointestinal disease with high mortality that has become more frequently encountered in neonates whose survival rates have increased due to advances in neonatology. The pathophysiology of NEC is thought to be based on disturbances in inflammation and immunity. Recently, the pan-immune inflammation value (PIV) has emerged as a comprehensive immuno-inflammatory biomarker and has been proposed as an indicator of clinical outcomes in certain types of cancer. PIV is calculated as: neutrophil count × platelet count × monocyte count / lymphocyte count.

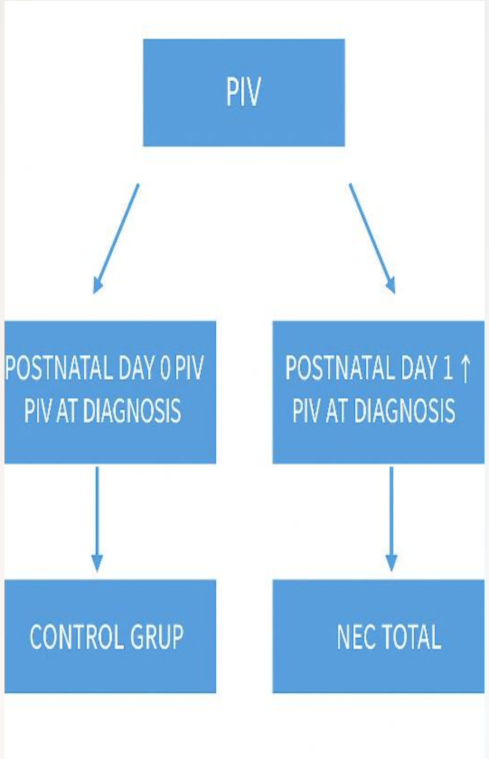
MATERİAL AND METOD

• Retrospective Case-Control Study
• Ethical approval (date: 03.05.2023, No: E-50687469-799-214653160)
• May 2018 – November 2022 • 40 patients • 753 control group participants
• This study was designed to evaluate the prognostic effectiveness of the panimmune inflammation value (PIV) in patients with necrotizing enterocolitis (NEC) and to investigate whether it could serve as a potential biomarker for the diagnosis of surgical NEC.

- When postnatal day 1 PIV measurements were evaluated among NEC groups, the mean PIV value in the NEC stage 3 group (1418.09) was found to be significantly higher than in the NEC stage 1–2 group.

• At the time of diagnosis, the mean PIV value in the NEC stage 3 group (764.03) was significantly lower compared to the NEC stage 1–2 group.
• In the total NEC group, the postnatal day 0 PIV measurement (632.35) was significantly lower than that of the total control group, while the PIV value at the time of diagnosis (943.42) was significantly higher compared to the total control group





DISCUSSION

•In our study, when PIV values measured at the time of diagnosis were compared between the total NEC group and both premature and term control groups, higher PIV results suggested that this parameter could potentially support the diagnosis of NEC.In surgical NEC patients, the significantly higher PIV value on postnatal day 1 and the significantly lower PIV value at the time of diagnosis indicate that PIV may serve as a useful diagnostic marker in identifying cases requiring surgical intervention

In this study, conducted to demonstrate that PIV considered an easy, simple, inexpensive, and rapid diagnostic tool could serve as a prognostic factor for NEC, it was shown that the postnatal day 1 PIV marker could distinguish surgical NEC cases. The finding that the PIV value measured at the time of diagnosis was significantly lower in surgical NEC patients highlights the potential importance of PIV in supporting surgical decision-making.The significant difference observed between preterm and term neonates indicates that immaturity in premature infants can be reflected through PIV values.