

Risk factor for life-threatening disease in preemies identified

January 16 2014

Many premature infants suffer a life-threatening bowel infection called necrotizing enterocolitis (NEC).

Researchers at Loyola University Health System have identified a marker to identify those infants who are at risk for the infection, enabling doctors to employ early preventive strategies. These findings were published in the latest issue of the *Journal of Pediatric Surgery*.

"This information will allow us to better care for these [premature infants](#) ," said Jonathan Muraskas, MD, study investigator and co-medical director of Loyola's neonatal ICU. "Simple changes to [blood transfusion](#) practices, feeding patterns and treatment of these infants may significantly reduce the incidence of NEC."

NEC is the most common serious gastrointestinal disorder among preterm newborns. It affects up to 10 percent of extremely low birth weight infants and has a mortality rate of nearly 30 percent. There is no known cause for the disease, yet researchers believe it may result from a combination of decreased blood flow to the bowel, feeding patterns, infection, mechanical injury or abnormal immune response.

NEC occurs when the lining of the intestinal wall dies and tissue falls off. Most cases of NEC are mild to moderate and can be successfully treated with antibiotics. But in severe cases, a hole can develop in the intestine, allowing bacteria to leak into the abdomen causing a life-threatening infection.

This study evaluated 177 infants born at less than 32 weeks' gestation and/or babies who were less than 3 pounds, 3 ounces. Blood samples were collected from these infants within 72 hours of birth and weekly for four weeks to measure reticulated platelets (RP) and intestinal alkaline phosphatase (iAP). Of the 177 infants, 15 (8.5 percent) developed NEC. Of these, 93 percent had low RP levels and 60 percent had high iAP. Those infants with low RP levels were significantly more likely to develop NEC while those with high iAP showed a similar trend.

"Decreased reticulated platelets serve as a sensitive indicator for NEC onset," Dr. Muraskas said. "Further research also may find that [infants](#) with elevated iAP levels may be at risk for this serious illness."

Provided by Loyola University Health System

Citation: Risk factor for life-threatening disease in preemies identified (2014, January 16) retrieved 28 March 2023 from <https://medicalxpress.com/news/2014-01-factor-life-threatening-disease-preemies.html>

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