Radiologists develop scale to help clinicians predict disease severity in infants with NEC

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Radiologists at Duke University Medical Center have developed a scale called the Duke Abdominal Assessment Scale (DAAS) to assist clinicians in determining the severity of disease and the need for surgery in infants with necrotizing enterocolitis (NEC), according to a study in the November issue of the *American Journal of Roentgenology*.

NEC is a serious disease that causes infection and inflammation of the intestines in infants, primarily those that are premature. Its cause is unknown however it is one of the leading causes of surgical intervention in preemies and has a death rate of 25 percent.

"The DAAS provides a standardized 10-point radiographic scale that increases with disease severity," said Caroline L. Hollingsworth, M.D., lead author of the study. For every 1-point increase in the DAAS score, patients are more likely to have severe disease and more likely to need a surgical intervention," she said.

Researchers performed a case-control study of 43 infants to assess whether the DAAS could serve as a clinically useful tool for predicting disease severity in neonates and infants with clinically suspected NEC. "We found that the use of a standardized scale like the DAAS may enable earlier detection of patients at risk for developing severe NEC by creating a clear, concise radiology report that provides the clinician with a consistent measure of concern by the radiologist. We also found that improved communication through standardized reporting using an accurate scale like the DAAS may affect medical decision making in a

positive way and hasten the accurate identification of patients in need of intense medical surveillance or surgical intervention," said Dr. Hollingsworth.

"Our study suggests that using the DAAS score when interpreting abdominal X-rays in neonates and infants with clinically suspected NEC may help guide increased level of clinical concern and monitoring for advanced NEC. Radiographic monitoring of disease progression and heightened clinical awareness through improved communication via the DAAS system has been a tremendous help to our clinicians at Duke," she said.

Source: American Roentgen Ray Society