



To KP or not to KP; Challenging Perceptions of Neonatal Sepsis

R. Roots¹, E Senkal¹, T Soribe¹, S Yasin¹

1.) St. Helier Hospital

Corresponding Author:

Rosie Roots

rosie_0409@outlook.com

London Paediatrics 2022: Volume 1 (1)

Accepted for publication March 2022

To subscribe to London Paediatrics:

<http://journal.londonpaediatrics.co.uk>

Article submissions and author instructions:

<http://journal.londonpaediatrics.co.uk/index.php/1/about/submissions>

Background:

Current local guidelines for early onset neonatal sepsis are based on the 2012 NICE guidelines.¹ Some trusts have transitioned to the Kaizer Permanente neonatal sepsis risk stratification tool.² In our cohort, would the number of ultimately negative screens be reduced, without positive screens being missed if we applied KP?

Methods:

Badgernet was used to identify all babies who were treated with IV antibiotics in June and July 2021. Management was compared to our local guideline. We then ran each case through the KP neonatal sepsis calculator.

Results:

66 babies were treated for EONS; this is 56% of live births, a 41% increase on 2019. 23 of these cases had positive screens, resulting in a number needed to treat of 3. 56% of screens were based on clinical indications in baby only. 52 of the cases were suitable to be run through the KP tool. Sensitivity of KP in our cohort was 35% (CI 0.14-0.55) and specificity was 84% (CI 0.71-0.96), p value 0.02. We found there was potential to reduce total screens by 84% however this would result in a false negative rate of 65%.

Analysis:

The perception that most EONS screens are based on maternal factors underpins the KP tool. However the majority of screens at our unit were based on clinical baby factors; hence it is no surprise therefore that a tool focussed mainly on maternal risk factors has a high false negative rate. The clinical side of the tool would need to be modified for use in our cohort.

References:

- 1.) Escobar GJ, Puopolo KM, Wi S, Turk BJ, Kuzniewicz MW, Walsh EM, Newman TB, Zupancic J, Lieberman E, Draper D. Stratification of risk of early-onset sepsis in newborns > 34 weeks' gestation. *Pediatrics*. 2014 Jan;133(1):30-6. doi: 10.1542/peds.2013-1689. Epub 2013 Dec 23. PMID: 24366992
- 2.) NICE; Neonatal infection: antibiotics for prevention and treatment. NICE guideline [NG195] Published: 20 April 2021. <https://www.nice.org.uk/guidance/ng195>