



## The Noncritically Ill-Appearing Febrile Infant with a Positive Urinalysis: Are Blood Cultures and/or Lumbar Punctures Indicated?

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It is not uncommon for a non-toxic appearing febrile infant  $\leq 60$  days to have a positive urinalysis (UA). What should be done next? Are we obligated to get blood cultures or a lumbar puncture to make sure we don't miss a bacteremia or meningitis? Mahajan et al ([10.1542/peds.2021-055633](#)), representing the Pediatric Emergency Care Applied Research Network (PECARN), explored the risk of bacteremia or meningitis in febrile infants with a positive UA.

The authors share with us the results of a secondary analysis of a PECARN prospective observational study looking at serious bacterial infections in infants  $\leq 60$  days who had a blood culture obtained in 26 emergency departments between 2011 and 2019. Of 7,180 enrolled infants in the study, 1,090 had positive UAs. The risk of bacteremia was greater in those with positive UAs than negative UAs (5.8% vs 1.1%) but there was no difference in meningitis risk between the two groups (approx. 1% in both).

What makes this study even more interesting is that infants 29-60 days with positive UAs had no cases of bacterial meningitis whereas 0.2% of those without a positive UA did have meningitis. If infants  $\leq 60$  days of age met [PECARN's Febrile Infant Prediction rule](#), meaning an absolute neutrophil count less than 4000 cells/mm<sup>3</sup> and a procalcitonin level  $< 0.5$  ng/ml, there were no cases of bacteremia or meningitis with a positive UA.

These findings introduce some interesting choices in clinical decision making. The authors of this study suggest that the low risk of meningitis in infants older than a month of age with a positive UA and the low risk of bacteremia based on PECARN criteria are met do not necessarily need a blood culture or lumbar puncture. Do you agree? The authors note some limitations of their data but still provide a convincing argument that a positive UA in a non-toxic appearing infant might not warrant as aggressive a work-up as was routine in the past. Link to this study and let us know whether you agree with what the authors suggest by leaving comments on our social media sites, or on the published study on our website.

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