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**First Author:** Roberto Velasco, MD  
**Presenting Author:** Roberto Velasco MD  
**Contact Author:** Roberto Velasco, MD **Email:** robertovelascozuniga@gmail.com

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**Subspecialty:** Emergency Medicine  
**Theme:** Hospitalist Medicine

**Presenting Author:** Roberto Velasco MD  
**Department/Institution/Address:** C/ PISUERGA 7 3º B, LAGUNA DE DUERO, 47140, Spain  
**Phone:** 0034 665011672 **Fax:**  
**Presenting Author E-mail:** robertovelascozuniga@gmail.com  
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**Study Group associated with your submission (if applicable):**

Group for the Study of the Young Febrile Infant of RISEuP-SPERG Network

### QUESTIONNAIRE INFORMATION

**Eastern Society for Pediatric Research:** No, Do not consider this abstract for the Eastern SPR  
**Pediatric Hospital Medicine:** No, Do not consider this abstract for presentation at the Pediatric Hospital Medicine, July 24-27, 2014  
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### AWARDS APPLIED FOR:

APA Michael Shannon Research Award, ASPN Fellow Research Presentation Award

**Title:** *ACCURACY OF URINE DIPSTICK TO IDENTIFY FEBRILE INFANTS UNDER 90 DAYS OLD WITH A POSITIVE URINE CULTURE. AN SPANISH PEDIATRIC EMERGENCY RESEARCH NETWORK'S (RISeuP-SPERG) STUDY*

Roberto Velasco, MD<sup>1</sup>, Helvia Benito, MD<sup>1</sup>, Rebeca Mozun, MD<sup>1</sup>, Juan E Trujillo, MD<sup>1</sup>, Pedro A Merino, MD<sup>2</sup> and Group for the Study of the Young Febrile Infant of of RISEuP-SPERG Network<sup>3</sup>. <sup>1</sup>PEDIATRICS, RIO HORTEGA UNIVERSITY HOSPITAL, VALLADOLID, 47140, Spain; <sup>2</sup>INTENSIVE CARE UNIT, RIO HORTEGA UNIVERSITY HOSPITAL, VALLADOLID, 47140, Spain and <sup>3</sup>SEUP, MADRID, Spain.

**Background:** Gold standard for diagnosing UTI is the growth in a urine culture(UC) of >50000 cfu/ml of a single pathogen. Suspicion diagnosis is made when an altered urine dipstick(UD) result is obtained. The AAP UTI guidelines for children between 2 and 24 months show Sn/Sp values of 83%/78% for leucocyte esterase(LE) test, 53%/98% for nitrite test(NT) and 93%/72% for at least one of both test positive.

**Objective:** To determine the accuracy of UD in identifying a UC+ in febrile infants under 90 days old.

**Design/Methods:** Subanalysis of a prospective multicenter study developed in 19 Spanish Pediatric Emergency Departments (PED) belonging to the RISEuP-SPERG, including febrile infants under 90 days old with fever without source (FWS) attended at the PED between Oct'11 and Sep'13.

UC+ was defined as the growth of >50000 cfu/ml of a single pathogen collected by a sterile method

**Results:** A total of 3,315 patients were included, 1978(59.6%) male.

Among them, 168 female patients [12.5%(CI95% 10.8-14.4)] and 461 [23.3%(CI95% 21.5-25.2)] males had a UC+.

On the table results and diagnostic values of UD are shown:

	UC+	Sn (CI95%)	Sp (CI95%)	PPV (CI95%)	NPV (CI95%)	LR+	LR-
LE+	515/712	81,8 (78.6-84.6)	92,7 (91.6-93.6)	72,3 (68.9-75.5)	95,6 (94.8-96.3)	11.2	0.20
NT+	230/259	36.4 (32.7-40.2)	99.0 (98.5-99.3)	89.1 (84.7-92.4)	86,9 (85.7-88.1)	33.9	0.64
LE or NT +	526/738	83,6 (80.5-86.3)	92,1 (91.0-93.1)	71,3 (67.9-74.4)	96 (95.2-96.7)	10.6	0.18
LE and NT +	218/233	34.7 (31.0-38.5)	99.4 (99.1-99.7)	93.6 (89.7-96.1)	86.7 (85.4-87.8)	61.9	0.66

Sn of LE and NT was greater in females, so it was NPV of LE test [98.0%(CI95%97.0-98.7) vs. 93.9%(CI95% 92.6-95.0)].

Meanwhile, PPV of LE test was greater for males [79.9%(CI95%76.0-83.3) vs. 58.4%(CI95%52.2-64.3)]

UD was normal with UC+ in 84 [4.25%(CI95% 3.44-5.23)] male patients and 19 [1.42%(CI95% 0.91-2.21)] female patients.

There was no difference when analyzing subgroups of ages.

**Conclusions:** LE test showed, at least, the same accuracy in predicting a positive UC in young febrile infants than the previously reported for older children and showed important differences related to the gender. A negative UD allows the physician to rule out a UTI in a female patient more safety than in males. A positive LE test predicts UTI in males in a more feasible way.

**Other Previews:**

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