THE USEFULNESS OF PROCALCITONIN IN AIDING PHYSICIAN ASSESSMENT AND TREATMENT OF POTENTIAL SERIOUS BACTERIAL INFECTIONS

Jennifer K. Homa, MS; Taylor A. Romdenne, BS; Alex D. Christl, BS; Ashley R. Heesacker, PA-C; Darren M. Heesacker, MD

1 Advocate Aurora Research Institute, Advocate Aurora Health, Milwaukee, WI; 2 Emergency Department, Aurora BayCare Medical Center, Green Bay, WI; 3 Emergency Medicine, BayCare Clinic, Green Bay, WI

BACKGROUND
Procalcitonin (PCT) is used as a biomarker for the diagnosis of serious bacterial infections (SBI). To date, studies have not compared PCT to clinical judgment and it remains unclear whether PCT adds to the physician’s clinical judgment when diagnosing SBI.

OBJECTIVE
The current study evaluated the diagnostic usefulness of PCT in comparison to blood culture results and the physician’s clinical judgment in patients presenting to the Emergency Department (ED) with signs of sepsis or other SBI.

RESULTS
Among the patients, 186 (46.5%) were diagnosed with an SBI during their hospital stay.

PCT results were higher for patients who were diagnosed with an SBI (median = 0.46) than for those who were not diagnosed with an SBI (median = 0.12), U = 12365.5, z = -6.58, p < 0.001, r = 0.33.

CONCLUSIONS
We found that PCT, blood culture results, and clinician judgment after reviewing SOC lab results provide important diagnostic value when diagnosing SBI.

Clinician judgment before reviewing SOC lab results was not associated with an SBI diagnosis, thus SOC lab results do have added value in aiding physician assessment of potential SBI.

This study offers a unique perspective as, to date, no other studies have compared PCT results to clinical judgment. Moreover, the methodology utilized in this study lends itself well to additional examination of clinician judgment in the hospital and clinic settings.

REFERENCES

ACKNOWLEDGMENTS
The authors acknowledge the BayCare Clinic Scholarship for funding this research.

CORRESPONDENCE
Jennifer.Homa@aah.org

© Aurora Health Care, Inc.