Medical Xpress

Study debunks common misconception that urine is sterile

March 30 2015

Bacteria have been discovered in the bladders of healthy women, discrediting the common belief that normal urine is sterile. This finding and its implications were addressed in an editorial published by researchers from Loyola University Chicago Stritch School of Medicine (SSOM) in the latest issue of *European Urology*.

"Clinicians previously equated the presence of bacteria in urine to infections. The discovery of bacteria in the urine of healthy females provides an opportunity to advance our understanding of bladder health and disease," said Alan Wolfe, PhD, lead author and professor in the Department of Microbiology & Immunology, SSOM. "Physicians and researchers must reassess their assumptions surrounding the cause of lower urinary tract disorders and consider new approaches to prevent and treat these debilitating health issues."

Stritch researchers evaluated urine specimens collected directly from the bladder through an aspiration or a catheter to avoid contamination. These specimens were analyzed using an expanded quantitative urine culture (EQUC) technique that identifies bacteria not detectable by the standard urine culture techniques typically used to diagnose urinary tract syndromes. This study also used 16S rDNA sequencing to classify bacterial DNA.

"While traditional urine cultures have been the gold standard to identify urine disorders in the past, they do not detect most bacteria and have limited utility as a result," Dr. Wolfe said. "They are not as

comprehensive as the testing techniques used in this study."

Through their analysis, Loyola researchers found that certain bacteria in the female bladder may contribute to symptoms of urinary incontinence. They also revealed that some bacteria are more common in women with urgency urinary incontinence than in healthy women.

"If we can determine that select bacteria cause various lower urinary tract symptoms, we may be able to better identify those women at risk and more effectively treat them," said Linda Brubaker, MD, MS, co-author, dean and chief diversity officer, SSOM.

Loyola researchers will further explore the role of urinary bacteria in health and disease to learn more about common lower urinary tract disorders such as urinary tract infections, overactive bladder, urinary incontinence and painful bladder syndromes.

Provided by Loyola University Health System

Citation: Study debunks common misconception that urine is sterile (2015, March 30) retrieved 6 May 2024 from https://medicalxpress.com/news/2015-03-debunks-common-misconception-urine-sterile.html