Travel 'superbugs' add infection risk to common procedures

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Travellers are at increased risk of superbugs.

Travellers exposed to antibiotic-resistant bacteria may force a change to common medical procedures that rely on effective antibiotics, say researchers from The University of Queensland.

Researchers from UQ Centre for Clinical Research urge patients to disclose recent overseas travel to their medical practitioner before undergoing procedures involving the urinary tract, as they could be at increased risk of infection.

Infectious Disease Physician and Microbiologist Dr Patrick Harris said the increase in international travel and over-use of antibiotics were creating a global spread of multi-drug resistant bacteria including E. coli and Klebsiella pneumoniae, which commonly cause UTIs.

"Following overseas travel to endemic areas, resistant bacteria strains can live quietly within our bodies undetected without any symptoms for months," Dr Harris said.

"If you then develop an infection, the risk of this being caused by bacteria that can resist antibiotics is much increased."

"Patients undergoing prostate biopsy for cancer detection, receiving a long-term urinary catheter to relieve bladder obstruction or a kidney transplant are at an increased risk, because such procedures rely on effective antibiotics to either prevent or treat infections should they arise,

"Worst-case scenario, an infection that cannot be cleared by antibiotics can result in multi-organ failure and this can be fatal."

Men who have travelled or used antibiotics between six and 12 months before a prostate biopsy should inform their urologist, as additional tests or treatment may be required. Such drug-resistant strains are also increasingly seen in nursing home residents or those with previous exposure to antibiotics.

Microbiologist, Professor Mark Schembri from the UQ School of Chemistry and Molecular Biosciences, says novel techniques may prevent recurrent UTIs and catheter-associated UTIs, while new approaches to prostate biopsy may reduce infectious complications.

"Novel therapeutics involving bacterial interference and anti-adherence

molecules hold great promise as future prevention strategies," he said.

Urinary tract infections (UTIs) are among the most common human infectious disease. About 50 per cent of women and 5 per cent of men will develop a UTI at least once in their lifetime. Australians who suffer from chronic recurrent UTIs are at risk of being infected with antibiotic-resistant bacteria

The multidisciplinary team was reviewing the global impact of antibiotic resistance on urology practice. Their paper is published in *Nature Reviews Urology*.

"Solving this issue requires responsible use of antibiotics, rapid detection and adherence to infection-prevention practices. New research into non-antibiotic treatments and preventive strategies are also required," Professor Schembri said.

More information: "The emerging threat of multidrug-resistant Gram-negative bacteria in urology." *Nature Reviews Urology* (2015) DOI: 10.1038/nrurol.2015.199

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