China, India travel boosts risk of antibiotic resistant cystitis

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Unregulated antibiotic use in many Asian farms can lead to widespread resistance, which is passed to humans through the food chain. Credit: http://www.flickr.com/photos/andjohan

Experts have warned of the growing risk of travellers to India, China and South East Asia bringing home E.coli infections that are immune to treatment with a normal course of antibiotic tablets.

People with an antibiotic resistant E.coli urinary tract infection (UTI) are up to six times more likely to have recently travelled to India than those with a typical E. coli UTI, a new study has found.

The findings, to be presented this week at the Australasian Society for Infectious Diseases' Scientific Meeting, were revealed in a press conference convened by the Australian Science Media Centre on Monday.

The new research, titled the Community Onset of Extended-spectrum ?-lactamase-producing E. coli (COOEE) Study, centred on 180 people with E.coli infections, the bacteria that most commonly causes UTIs, also known as cystitis.

Half of the group had E. coli infections that were antibiotic resistant and the other half, known as the control group, had E. coli infections that were treatable with normal antibiotics.

Most of the patients studied (83%) had E.coli present in their urine but 17% also had it in their blood. Most suffered from a UTI but others had upper tract infections, meaning the bacteria had spread to their kidneys. Some people had no symptoms at all.

Of the group studied, 27% had travelled overseas in recent months.

"We found there is a six times higher likelihood that a person who got an antibiotic resistant E.coli had been to India recently, compared to the control group," said co-author of the study, Professor David Paterson from the University of Queensland Centre for Clinical Research.

"Out of all the people who had antibiotic resistant infections, 4.4% had travelled to China, whereas none of the people with antibiotic susceptible E.coli had travelled to China."

Professor Paterson emphasised that his study focused on one group and did not look at the total number of people who travelled between Australia and India.

"My guess would be that well over 50% of people who go to India do not come back with an antibiotic resistant bacteria that causes an infection. We are not warning people not to go to Southeast Asia or India," he said.

"It's more that if we go overseas, we need to be aware of this issue and take precautions. When you come back to Australia, you need to let your doctor know if you get sick."

Unregulated antibiotic use by livestock farmers

overseas had increased the prevalence of antibiotic resistant E. coli in Asia and South America, said Dr Paterson.

Humans can become infected by eating undercooked meat, vegetables that have been fertilised with animal manure or by visiting a hospital experiencing an outbreak of antibiotic resistant bacteria, he said.

"So if you are overseas, don't do silly things like hire a motor scooter if you aren't experienced at driving them because the real hotbeds of antibiotic resistance are hospitals overseas," said Professor Paterson.

"Don't eat meat that's not well cooked, don't have ice in drinks, avoid green leafy vegetables that may have been fertilised by manure and take a bottle of alcohol hand rub and use it before you eat. These are simple things people can do."

Men who pick up antibiotic resistant E.coli while overseas and then have a prostate biopsy after returning home are are at particular risk because the biopsy process can push the bacteria into the prostate, he said.

"I have had a number of patients who have ended up in intensive care after a prostate biopsy," he said adding that the other risk group was women who were prone to UTIs and had recently travelled to Asia.

"I have had to give people intravenous antibiotics for something that, for the rest of the antibiotics era, would would have been treated with tablets," he said.

"That's been quite a change in our practice. It's a big deal."

Dr Martyn Kirk from the National Centre for Epidemiology and Population Health at the Australian National University said the results illustrated an emerging issue in the community.

"From a public health perspective, it's a big concern for us. There are concerns about people who travel and making sure they get good travel advice before they go and take precautions when they are eating food overseas or if they suffer injuries," he said.

Source: The Conversation