

Emerging antibiotic resistance in Listeria

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Credit: sarosiek99 C.C

Malaysian researchers have revealed the presence of multidrug-resistant strains of *Listeria monocytogenes* in frozen burger patties taken from supermarkets and other retail shops in Malaysia. The research was published in *Pertanika Journal of Tropical Agricultural Science*.

A recent publication by W.C. Wong and colleagues in the *Pertanika Journal of Tropical Agricultural Science* revealed the presence of multidrug-resistant strains of *Listeria monocytogenes* in frozen burger patties taken from supermarkets and other retail shops in Malaysia.

The results also suggested that the overall incidence of antibiotic resistance in *L. monocytogenes* is relatively low, and that most of the bacterial strains isolated from food are susceptible to antibiotics commonly used in veterinary and human therapy.

Often found in raw foods, *L. monocytogenes* can cause listeriosis when ingested. Symptoms may range from gastrointestinal upset to headaches, fever and, in severe cases, brain infection and/or

blood poisoning. Those at highest risk include pregnant women, newborns and the elderly, as well as people with weakened immune systems.

Early diagnosis of listeriosis increases the likelihood of applying appropriate antibiotic treatment before serious consequences occur. The most commonly used antibiotics for treating *Listeria* infections are ampicillin, penicillin, trimethoprim, tetracycline, erythromycin and gentamicin.

In this study, researchers examined the susceptibility of *L. monocytogenes* isolated from raw beef, chicken and vegetarian patties to 11 different antibiotics. Thirteen out of 41 bacteria samples or isolates were not resistant to any of the antibiotics, while 28 were resistant to at least one. Moreover, 19 out of 41 isolates showed resistance to at least two antibiotics. The most common form of antibiotic resistance was tetracycline resistance, followed by erythromycin resistance. However, none of the 41 isolates were resistant to imipenem or gentamicin.

Antibiotic-resistant *L. monocytogenes* strains were first reported in 1988. The spread of antibiotic-resistant bacteria is accelerating worldwide, partly due to the over-prescription of drugs in clinical settings and the heavy use of antibiotics as growth promoters in livestock husbandry.

The authors recommend the continuous monitoring of antimicrobial resistance in *L. monocytogenes* to assure the ongoing effectiveness of listeriosis treatment.

More information: Wong et al. Antibigram Pattern among Cultures of *Listeria monocytogenes* isolated from Frozen Burger Patties in Malaysia, *JTAS* Vol. 35 (4) Nov. 2012.

www.pertanika.upm.edu.my/Pertanika%20PAPERS/JTAS%20Vol.%2035%20%284%29%20Nov.%202012/09%20Page%20793-804.pdf

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