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Abstract (600 word limits)

First report of Klebsiella pneumonia co-producing NDM-1 and VIM-1 carbapenemases from a meat sample in Japan.

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Carbapenems are a class of highly potent antibiotics that are commonly used as last-resort antibiotics for treatment of severe infections caused by multidrug-resistant bacteria. Therefore, carbapenem antibiotics are not licensed for food-producing animals in many countries, only for human use. This study was designed to elucidate the incidence and molecular characterization of foodborne carbapenemases producing bacteria in Japan. A total 28 meat samples were collected from local groceries in Higashi-Hiroshima city, Hiroshima, Japan, and tested for carbapenemases-encoding genes. Interestingly, 17 bacterial isolates were recovered and only one isolate confirmed to harbor both $bla_{\text{NDM-1}}$ and $bla_{\text{VIM-1}}$. To the best of our knowledge, this is the first report of carbapenem-resistant *Klebsiella pneumonia* isolated from food in Japan that produces NDM-1 and VIM-1 carbapenemases. The strain was resistant to various antibiotics and harbored $bla_{\text{NDM-1}}$, $bla_{\text{SHV-71}}$, $bla_{\text{CTX-M-15}}$, $bla_{\text{TEM-1}}$, *qnrS-1*, and *aac(6')-1b* as well as two class 1 integrons: one containing $bla_{\text{VIM-1}}$ and the other *aadB-aadA2* and belongs to sequence type (ST) 30 . In addition, $bla_{\text{NDM-1}}$ was carried on an untypeable self-transmissible plasmid > 90 kb in size. Our results are of a great interest and urge the authorities to consider the food as a potential source for carbapenemases and to comprise it for carbapenemase-producing organism's surveillance programs.

Biography (200 word limit)

Tadashi Shimamoto has completed his PhD at the age of 28 years from Okayama University, Japan and postdoctoral studies from University of Medicine and Dentistry of New Jersey, Robert Wood Johnson Medical School, USA. He is a professor of Laboratory of Food Microbiology and Hygiene, Graduate School of Integrated Sciences for Life, Hiroshima University, Japan. He has published more than 80 papers in reputed journals.

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