

New Delhi metallo-beta-lactamase-1 enzyme acquired in Canada

May 30 2011

An enzyme associated with extensive antibiotic resistance called New Delhi metallo- β -lactamase-1 (NDM-1), endemic in India and Pakistan and spreading worldwide, has been found in two people in the Toronto area, one of whom acquired it in Canada, states a case report in *CMAJ* (*Canadian Medical Association Journal*). The report outlines challenges and approaches to managing and identifying this pathogen, which is highly resistant to treatment.

NDM-1 has spread because of worldwide travel, medical tourism and its ability to transfer between bacteria.

In one of the cases in this report, the patient had not travelled outside southwestern Ontario in over a decade, and no source could be identified for the organism. In the other case, the patient had been hospitalized in India for a medical procedure and acquired the organism there.

"These two scenarios show that local acquisition of an organism producing NDM-1 has already occurred in Ontario, Canada, that blaNDM-1 has been found in bacterial species other than [*Escherichia coli*] and [*Klebsiella pneumoniae*], that treatment options are limited for infections with NDM-1-producing [organisms](#), and that the detection of NDM-1-producing organisms by a laboratory can be difficult," writes Dr. Susan Poutanen, Mount Sinai Hospital and University Health Network, with coauthors.

In the case of the patient who had not travelled, the authors note: "To the

best of our knowledge, this is the first reported instance in which an NDM-1-producing organism was locally acquired in Canada."

In cases where patients are infected with NDM-1, extensive infection control precautions must be taken, including isolation in single rooms and enhanced cleaning.

"European guidelines recommend even more precautionary approaches to protecting patients admitted to hospital and suggest that all hospitals should have preparedness plans in place," state the authors.

Laboratory detection of the pathogen is also difficult, and labs should adopt different screening procedures.

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