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[\[PDF \(596K\)\]](#) [\[References\]](#)**Distribution and Characteristics of Enterotoxigenic and Methicillin-Resistant *Staphylococcus aureus* in the Nares of Humans and Animals**[Chisa NAKANO](#), [Akira SHIMIZU](#), [Junichi KAWANO](#), [Satoru KITAI](#) and [Hiroshi KITAGAWA](#)

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**Abstract**

Nasal samples of humans and animals were examined for the presence of *Staphylococcus aureus*, and subsequently the incidence of enterotoxigenic and methicillin-resistant *S. aureus*. Additionally, characteristics of the isolates were studied. The carrier rate of *S. aureus* was 42.7% (38/89) for humans, 86.4% (57/66) for pigs, 19.8% (20/101) for cows, and 9.5% (4/42) for chickens. By using a commercial SET-RPLA kit, 22 isolates from humans produced staphylococcal enterotoxin (SE) A ( $n=8$ ), SEB ( $n=9$ ), and SEC ( $n=5$ ). *S. aureus* isolates were subjected to genotyping analysis for detection of *se* genes (*sea* to *see*, *seg*, *seh* and *sei*). The *se* genes were detected in 25 (65.8%) of 38 human, 34 (59.6%) of 57 pig, and 4 (100%) of 4 chicken isolates. Twenty-five human isolates possessed the *sea* ( $n=8$ ), *seb* ( $n=4$ ), *seb-seg-sei* ( $n=5$ ), *sec-sei* ( $n=4$ ), *sec-seg-sei* ( $n=1$ ) or *seg-sei* ( $n=3$ ) genes. Thirty-four isolates from pigs and 4 isolates from chickens possessed *seg-sei* genes.

MRSA was detected from only 5 food handlers. Phenotypic and genotypic characteristics of 3 MRSA isolates from the 3 food handlers in the same facility were identical except for two phenotypic characteristics. Therefore, the results may suggest that the horizontal transmission of MRSA occurred in the facility.

**Key words:**[MRSA](#), [Nasal carriage](#), [se genes](#), [Staphylococcus aureus](#), [Staphylococcal enterotoxins](#)[\[PDF \(596K\)\]](#) [\[References\]](#)

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