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Journal Name:	British Microbiology Research Journal
Manuscript Number:	2015_BMRJ_16457
Title of the Manuscript:	Clinical Characteristics, Antibiotic Resistance and Molecular Epidemiology of Methicillin-Resistant Staphylococcus aureus in South Taiwan
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<u>Compulsory</u> comments	The authors studied antibiotic susceptibility of MRSA and MSSA strains isolated from one of the hospitals in southern Taiwan in a single calendar year 2009 and attempted to link the data to the patient backgrounds such as age, gender, inpatient/outpatient, and specimen source, clinical department of the hospital and to PFGE profiles of the DNA from the isolates. The data presented and the interpretations are in accord with previous publications from elsewhere as the authors stated. Problems of this manuscript are as follows. (i) The authors collected MRSA/MSSA strains only from one of the hospitals in southern Taiwan and stated as if the data are representative of southern Taiwan (e.g. Title and elsewhere). This is misleading. (ii) The specimens are the collection of a single calendar year (2009). This kind of survey may have meaning as the data were collected for several consecutive years and trends of antibiotic susceptibility were shown. (iii) The PFGE data of the specimens collected from a single hospital only give information about intra-hospital dissemination of MRSA/MSSA strains. The authors may not be sure whether the trends could be applicable to other hospitals. (iv) Data were presented poorly without focusing. Therefore, it	The title has been changed. So far MRSA data in Taiwan reported mainly concentrated at north part of Taiwan, Related clinical and microbiological results of MRSA and MSSA collected from South Taiwan are extremely limited. Moreover, this study collected over 430 samples from this organized teaching hospital at South Taiwan and is the first time to combine clinical categories of MRSA/MSSA patients with the antibiotic resistant data from South Taiwan. Thus, the data displayed in the current investigation are quite representative and important for this region and neighboring areas.. The data in this study focused on the relationship between molecular epidemiology, clinical features and antibiotic resistance of MRSA/MSSA samples from South Taiwan and these were also represented and emphasized throughout this investigation. Monotone



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	is not clear what the authors wished to emphasize in the paper. Also description was monotone. (v) Though a large numbers of data was presented, the authors description in the result section was only limited. (vi) Descriptions often appeared inappropriate. The data may be value and useful for domestic use in the hospital from where the specimens were collected.	description is acceptable and quite common for an original research article though not appropriate for an essay. The type of this article is an original research article.
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Minor REVISION comments		
<u>Optional/General</u> comments	(1) Lines 30, 47 and elsewhere. References are missing. (2) Lines 64-69 and elsewhere. Abbreviations for antibiotics seem inappropriate. Use generally accepted abbreviations, e.g. US, European Japanese or CLSI style. (3) Line 98. "The average age of patient with <u>MRSA</u> was 55.50 ± 24.36" to be read as "<u>MSSA</u>". Description is inconsistent with the data in Table 1. (4) Lines 96-105. The subject of this paper seems MRSA. Why the authors compare MRSA and MSSA in different age. Proportion of MRSA among ages should be compared. Similarly, proportion of MRSA in different gender, specimen sources, clinical sites (department) has to be compared, but not MRSA vs MSSA. (5) Table 3 and Section 3.2 for specimen source. Specimens from pus, blood, urine and other were not mention in the results. Why not to address in the result section. Why the authors only mentioned the specimens from the respiratory tract? (6) Similarly, clinical sites such as surgery, pediatrics and gynecology were not mentioned in the result section. What is the reasons to eliminated descriptions of other clinical sites but only mentioned ICU. (7) Table 5 and Section 3.4. The criteria for antibiotic resistance/susceptibility were not	References have been added to line 30. References are not necessary for line 47. All the abbreviations for antibiotics used in this study are according to CLSI style (CLSI, 2009). Line 98 has been corrected to "The average age of patient with MSSA was 55.50 ± 24.36..." The characteristic distributions and trends in different ages, gender, specimen sources and clinical sites of MRSA can be found in Table 1~4 by descriptive statistics. The related information has been added to Results and Discussion. The related information on specimen source has been added to the results and discussion. The related information on clinical sites has been added to the results and discussion. The criteria for antibiotic resistance/susceptibility were shown in suppl. 5. PFGE data of MRSA have been considered as an important factor when performing antimicrobial stewardship program in the hospital. Appropriate and strict segregation and surveillance measures in this hospital were firmly conducted to prevent hospital-acquired infections all the time so no dissemination of MRSA or MSSA was found. Despite being busy a bit, Table 8 and 9 represented important



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	shown. (8) Table 7–9, Fig. 1 and Section 3.5–3.6. The authors connected PFGE profiles to antibiotic resistance/susceptibility. Most powerful use of PFGE data is to analyze how specific DNA type strains disseminated in the hospital (regional, national or international dissemination). However, only a conclusion drawn from the data may be that MRSA with multiantibiotic resistance tends to disseminate more than MRSA resistant to less number of antibiotics. The authors failed to analyze how PFGE data reflected to the dissemination profiles of MRSA or MSSA within the hospital. Table 8 and 9 seems too busy. Recommend to simplify. (9) Line 161–169. “Gender is a potential influencing factor for MRSA/MSSA infection” is misleading. How does gender influence to MRSA/MSSA infections?. “Does active occupations or behavior affects MRSA/MSSA infection?” How. (10) Tables are too complicated presenting different categories into one table. Table 1 presented average age, gender, service. What could be the connection? Table 8 and 9 presented age, gender, department, and specimen. There is no way of comparing among these. And more ----- stop here -----	information on the contributions and trends in the parameters like gender, age, department and specimen source for different PFGE typing as well as antimicrobial patterns of MRSA. These results obtained from South Taiwan are very limitedly reported and thus the data remain in the tables. The tone and some words of the related sentences have been changed to Gender could be a factor for MRSA/MSSA infection and the possible reasons of gender differences in MRSA and MSSA occurrence might be due to that heavier physical loading occupations or behavior... Active or heavier loading work such as house building or road mending occupied many males’ working opportunities. These sentences belong to presumptive ratiocination based on the result of statistical analysis. Table 8 and 9 were represented by descriptive statistics and the contributions and trends in the parameters like gender, age, department and specimen source for different PFGE typing as well as antimicrobial patterns of MRSA. These data are important for disease control in Taiwan and neighboring areas and can be directly found in the tables.
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