

Volume 6, No. 1 (Supplement)

June 2011

ISSN 1823-2140

The National University
with an INTERNATIONAL REACH



UNIVERSITI
KEBANGSAAN
MALAYSIA
National University of Malaysia

MEDICINE & Health

The Official Journal of The Faculty of Medicine UKM

7th Malaysia Indonesia Brunei Medical Sciences Conference "TOWARDS A HOLISTIC AND INTEGRATIVE APPROACH IN HEALTHCARE"



22nd - 24th July 2011

Equatorial Hotel, Bangi, Selangor,
MALAYSIA

officiated by

Y.B Datuk Rosnah Haji Abdul Rashid Shirlin
Deputy Minister of Health Malaysia

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PREVALENCE AND ANTIBIOTIC SUSCEPTIBILITY OF *STAPHYLOCOCCUS AUREUS* ORGANISM IN NASAL SWABS AMONGST MEDICAL AND BIOMEDICAL STUDENTS IN PENGIRAN ANAK PUTERI RASHIDAH SA'ADATUL BOLKIAH INSTITUTE OF HEALTH SCIENCES, UNIVERSITI BRUNEI DARUSSALAM (UBD)

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Background:

Staphylococcus aureus (*S. aureus*) may cause a variety of pus-forming infections, minor skin infections and also life-threatening diseases. It is also one of the common causes of nosocomial infections. Medical and biomedical students in Brunei Darussalam are exposed to hospital environments by having hospital/laboratory attachments and clinical placements as part of their degree programme. Hence they are at greater risk in contracting hospital-acquired infections. This study aims to compare the prevalence of the bacteria amongst medical and biomedical students and to see the susceptibility of the bacteria against commonly tested antibiotics.

Material & Methods:

A cross sectional study was carried out in Pengiran Anak Puteri Rashidah Sa'adatul Bolkiah Institute of Health Sciences, UBD. Only medical and biomedical students in UBD were included in the research. Nasal swabs were taken from participants. The sample was inoculated, cultured and tested for *S. aureus* before introduced to commonly tested antibiotics (Tetracycline, Gentamicin, Chloramphenicol, Amoxicillin/Clavulanic acid, Trimethoprim/Sulphamethoxazole, Oxacillin and Vancomycin).

Results:

The response rate was 54.7%. 43.9% students ($n=18$) were found to carry *S. aureus* from their nasal swab. There were no association found between positive *S. aureus* with gender ($P=0.051$), academic year ($P=0.192$), course ($P=0.786$), patient contact ($P=0.530$), illness ($P=0.613$), non-academic hospital visits ($P=0.489$), medication ($P=0.706$), cigarette smoking ($P=0.439$), family member ill ($P=0.059$) and travel out of country ($P=1.000$). 5.6% ($n=1$) were found to be resistant to Tetracycline and Gentamicin; and 5.6% ($n=1$) intermediate resistance to Tetracycline.

Conclusion:

Although there were a number of limitations, we can fairly conclude that almost 50% students were found to have *S. aureus* from their nasal swab. Only 5.6% ($n=1$) were found to have resistant to Tetracycline and Gentamicin, and 5.6% ($n=1$) had intermediate resistance to Tetracycline. All *S. aureus* samples were found to be susceptible to the rest of the antibiotics.

Keywords:

Staphylococcus aureus, nasal swabs, antibiotic susceptibility, medical and biomedical students, Brunei Darussalam.