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Surveillance of methicillin-resistant *Staphylococcus aureus* (MRSA) at a general hospital in Saudi Arabia

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Background & Aim: MRSA colonization and infection are widespread worldwide causing significant morbidity and economic impact. MRSA is hard due to their resistance to commonly used antibiotics. Prevention is only hope if patients to be targeted are known. We present results of surveillance to identify at-risks patients and units in a Saudi Arabia hospital in Jeddah. The aim is to detect the range of MRSA spread through hospital wards and units, between the patients their genders and sites and to use the results to recommend effective infection control systems to prevent hospital acquired infections in hospital settings.

Methods: The subjects consisted of 597 in-patients from different wards between January 2010 and January 2011. A total of 2074 swabs from multi-sites were collected and tested with the BDGO BD GeneOhm using both PCR and conventional chromogenic culture. Smart Cycler® II software was used for amplifying, detecting and interpreting the results.

Results: There are statistically significant ($p<0.001$) overall MRSA infection prevalence of 25.2%. Units' prevalence ranges from 4.8% (medical rehabilitation) to 80% (coronary unit). There is statistically significant effects of age ($p=0.04$) and sex ($p=0.05$) on MRSA infection. Two of the swab sites are statistically significant [nasal swab ($p<0.01$)] and perineum ($p<0.001$).

Conclusions: From the findings of this study, we conclude that hospital surveillance of MRSA can help to identify not only at-risk patients but can also indicate which units to target activities of control of infection for effective results.

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Association of demographic factors with the prevalence of Human papillomavirus and *Chlamydia trachomatis* infection in cervical and anal cases of sexually active women in India

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Background: Human papillomavirus (HPV) is considered to be the main etiologic agent for cervical cancer and *Chlamydia trachomatis* (CT) is one of the major cofactors in the development of cervical intraepithelial neoplasia.

Aim: The present study was conducted to investigate the presence of HPV and CT infection in cervical and anal samples of sexually active women.

Material & Methods: We collected 60 cervical samples and 60 anal samples and screened them for HPV and CT. Female patients were included having the symptoms of genital infection such as pelvic inflammation, vaginal discharge and lower abdominal pain and having history of anal intercourse. Cervical and anal scrapes were used for the evaluation of HPV and CT using polymerase chain reaction.

Results: Among the cervical cases, positivity for HPV was 33% (20/60) and CT was 40% (24/60). In anal cases, the prevalence of HPV was 5% (3/60) and CT was 3% (2/60). The most common type of HPV found in our study was type 16 (85.7 %) followed by type 18 (14.3%). In cervical cases 27% (16/60) were co-infected, therefore in anal cases it was 5% (3/60). We found that socioeconomic status and educational level were significantly associated with these infections.

Conclusion: This study shows that HPV and CT prevalence is higher in cervical cases as compared to anal cases. There is need to continuously screen, counsel, treat and monitor trends of HPV and CT infection to make women aware about cervical cancer. Further, large population based studies are recommended to conclude this finding.

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