sampling, improper disposal of sharps, inappropriate handling of surgical equipment and communication problems when passing sharps were the major risk factors associated with NSI.

**Conclusion:** Needle stick injuries should be recorded in special forms and their causes should be analyzed and checked by infection control committee. Training and orientation about standard precautions, appropriate guidelines and staff awareness may reduce needlestick injuries.

**Panton-Valentine leukocidin-positive methicillin resistant Staphylococcus aureus in psoriasis patients**

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**Background:** Psoriasis is a chronic inflammatory cutaneous disorder, in which patients are prone to methicillin-resistant Staphylococcus aureus (MRSA) infection. The presence of Panton-Valentin leukocidin (PVL) genes are associated with increased severity in some diseases.

**Objectives:** To investigate the prevalence of MRSA skin colonization among psoriatic patients and if there is a relation between PVL expression and disease severity.

**Methods:** A case-control study was conducted over the period from February 2015 till April 2017 on 90 patients with active psoriatic lesions and 90 healthy controls. Demographic and clinical data of the patients were recorded including psoriasis area and severity index (PSAI) score. Skin swabs from psoriasis plaques and healthy control were collected. Identification of MRSA and their antibiotic susceptibility patterns were performed using routine microbiological Methods. meca and PVL genes were detected using PCR assay.

**Results:** The prevalence of MRSA among psoriatic patients was 23.3%. High significance difference was noticed in MRSA colonization between psoriasis and control groups. Five (23.8%) MRSA isolates from skin lesions were positive for meca and PVL genes. Antibiotic resistance among PVL negative MRSA was higher compared to PVL positive MRSA, specially towards clindamycin. Patients harboring PVL positive isolates had significantly lower mean age and higher PSAI score than those with negative isolates.

**Conclusion:** There was significant MRSA colonization in psoriasis group and presence of PVL contribute to increased severity of this disease. Further investigations are needed to detect the mechanism of this toxin in psoriasis and if could be used as a target for treatment.

**Prevalence of extended spectrum β-lactamase among Enterobacteriaceae clinical isolates in Egypt Children’s Hospital for Health Insurance**

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**Background:** Enterobacteriaceae producing an extended spectrum β-lactamase (ESBLs) have become of concern as they are the major cause of bacterial resistance to the beta-lactam family of antibiotics. ESBL producers are associated with increased morbidity and mortality hence the importance of their detection for proper treatment and for applying infection control measures in hospitals.

**Aim:** The aim of this study was to determine the prevalence of ESBL among Enterobacteriaceae clinical isolates in Egypt Children’s hospital for health insurance

**Methodology:** A total of 100 clinical isolates of Enterobacteriaceae were isolated from various clinical samples such as blood (n = 60), respiratory samples (n = 20), Pus / wound swab (n = 20) over a period of six months from July 2017 to December 2017. Phenotypic detection of ESBL production among Enterobacteriaceae isolates were done by double disk synergy test and the combination disk method.

**Results:** Out of 100 Enterobacteriaceae clinical isolates; 52 isolates were Klebsiella spp and 48 isolates were Escherichia coli. ESBL producing isolates were 10% and 8% among Klebsiella and Escherichia coli respectively.

**Conclusion:** This study has highlighted presence of ESBL production among Enterobacteriaceae clinical isolates in Egypt Children’s hospital for health insurance. It is recommended to implement infection control measures and formulate the antibiotic policy to prevent spread of ESBL strains.

**Production and biological activity of endophytic streptomyces species from different marine sources against methicillin resistant Staphylococcus aureus**

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Despite the significant progress in medicine, treating the infectious disease remains a serious problem due to the emergence of multidrug resistant in most of the pathogens. MRSA represents one of the problematic multidrug resistant bacteria of world -wide concern, as decreased susceptibility to one of the last resort antibiotic vancomycin and emergence of the resistant to it also has created an urgent need in the discovery of other alternative antibiotics. Marine ecosystem still an untapped source of microbial diversity and marine microbes. Actinomycyes isolated from marine environment are metabolically active and have adapted to life in the sea. Streptomyces are especially prolific and can produce a great many antibiotics and bioactive secondary metabolites. This work aimed to isolate the bioactive compound from endophytic marine Streptomyces sp. characterized with antimicrobial activity against MRSA and isolated from marine invertebrates (coral and jellyfish) existed at different area of the Mediterranean and the Red Sea in Egypt. In this study out of 41 specimens of gram positive staphylococci isolated from different cultures, 18 isolates of MRSA has been identified during the period from 2008 to 2009, the highest number of MRSA were collected from wound (50%) followed by sputum culture (44.4 %). In the current study 26 endophytic strains have isolated from 4 different marine sources, 25 endophytes from 3 different coral samples collected from Red Sea, Ghardaga and one endophyte from jellyfish collected from Mediterranean Sea, Abu Keir shore, Alexandria, Egypt. Out of 26 endophytic Streptomyces isolates two endophytic strains (Streptomyces vastus RS-9 and Streptomyces xanxochromogenus MS-26) possessed their potent and showed the highest level of...
antimicrobial activity against MRSA isolates. According to Purification Results by using fractional column chromatography technique, two pure compounds compound A and compound B, were separated from Streptomyces xanthochromogenus MS-26, while, no pure compound could be separated from Streptomyces vastus RS-9 isolate. The study of MIC value of compound A was relatively high as two MRSA strains only give MIC value of 16 μg/ml, meanwhile two other strains were 32 μg/ml. While MIC of compound B was 4, 8, 16, 32 and 64 μg/ml, showing that compound B has potent antimicrobial activity on MRSA isolates. Compound A and compound B have less moderate cytotoxic activity on liver and colon cancer cell line respectively.

Conclusion: Two bioactive pure compounds were isolates from marine endophytic Streptomyces xanthochromogenus MS-26 isolated from jellyfish collected from Mediterranean Sea Alexandria, Egypt, having antimicrobial activity against multi-drug resistant MRSA isolates, one of them (compound B) has potent activity. Compound A was related to isoquinoline antibiotic group with chemical formula: C15H19NO4 and molecular weight: 277. While compound B was related to coumarine antibiotic group with chemical formula: C22H22N2O7 and molecular weight: 426.