

**Type: Poster Presentation**

Final Abstract Number: 61.038

Session: Infection Control, Nosocomial Infections and Critical Care

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

**Risk factors of *Acinetobacter baumannii* infections**

E. Kucukler

Kyrenia Hospital, Kyrenia, Cyprus

**Background:** This research is carried out to determine important risk factors in the development of *Acinetobacter baumannii* infections in intensive care units by comparing infections due to *Escherichia coli* infections at Military Medical Hospital between 2008–2011 years.

Patient's age; pneumonia; comorbid disease like HIV; diabetes mellitus; cardiovascular system; respiratory system disease; cancer; high APACHE2 score; total parenteral nutrition existence; hospitalisation period before and after culture; previous hospitalisation existence; mechanic ventilation; central venous catheter; carbapenem fluoroquinolone cephalosporins aminoglycoside resistance and usage before culture; previous antibiotic usage are investigated.

Controlling these risk factors and decreasing the use of extended antibiotics as carbapenems and cephalosporins; decreasing hospitalisation in intensive care units and catheter usage besides indication; seem to reduce due to *Acinetobacter baumannii*.

**Methods & Materials:** This is a prospective study. There were 100 patients infected with *A. baumannii* and 100 patients with *E. coli* hospitalised in intensive care units.

Risk factors are investigated and found out the potential of risk factors; prevention of death and treatment policies.

**Results:** Age, respiratory disease and cardiovascular system disease, diabetes mellitus, high APACHE 2 score, immunosuppression, antibiotic usage hospitalisation before infection especially in intensive care units, central venous and nasogastric catheter, mechanic ventilation are found as risk factors for *A. baumannii* infections. Transfusion, hemodialysis and trauma are not found as risk factors.

Sensitivity to fluoroquinolones 3.3%, cephalosporins 6.7%, carbapenems 26.7%, aminoglycosides 33.3%, tygecycline 73.3%, colistin 100% is found.

**Conclusion:** Patients should not be hospitalised in intensive care units if not needed and externalised as soon as possible. Patients should be separated from mechanic ventilators. catheters especially central catheter if not needed. Usage prior antibiotics may cause resistance; death; ineffectiveness. Therefore to increase therapy effectiveness and to control nosocomial infections; hospital and unit flora, resistance to antibiotics, patient's illness, prior antibiotic usage and hospitalisation time should be looked for.

Education should be given by infection control committee, surveillance should be done. Antibiotic sensitivity can be investigated in intensive care units.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1287>

**Type: Poster Presentation**

Final Abstract Number: 61.039

Session: Infection Control, Nosocomial Infections and Critical Care

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

**Sustained reduction in ventilator-associated pneumonia in a tertiary care hospital**

A. Al Thaqafi, M. Yaseen\*, L. Medhat, A. Qudsi, A. Zahrani, Y. Tashkandi

King Abdulaziz Medical City for National Guards, Jeddah, Saudi Arabia

**Background:** Ventilator-associated pneumonia (VAP) is a leading cause of morbidity and mortality in intensive care units. Both patients and treatment related risk factors contribute to the incidence of ventilator-associated pneumonia. Hospital mortality of ventilated patients who develop VAP is 46 percent compared to 32 percent for ventilated patients who do not develop VAP.

**Methods & Materials:** This study was conducted in King Abdulaziz Medical City Jeddah Saudi Arabia. A multidisciplinary team was convened to work together and come up with prevention strategies to reduce the rate of VAP in a 22 bed medical and surgical ICU. The Institute for Healthcare Improvement Ventilator Bundle was instituted and included head-of-bed elevation (30–45 degree), extubation assessment, sedation break, peptic ulcer prophylaxis, and deep vein thrombosis prophylaxis. A daily checklist was considered compliant if all 5 items were performed for each patient. The data was collected on a daily basis by the Infection Preventionist and was analyzed and presented quarterly. The team meeting was held regularly to discuss the cases of VAP and any issue related to the compliance to the Ventilator Bundle.

**Results:** VAP rate at the time of initializing the Ventilator Bundle was 13.5 cases/1000 ventilator days in the first quarter of 2008 (8.4 overall in 2008) with 64% compliance to the Ventilator Bundle in the first quarter of 2008. Compliance with the Ventilator Bundle increased to 97% and the rate of VAP decreased to 0.6 cases/1000 ventilator days in the last quarter of 2012. The reduction in VAP rate and improvement in bundle compliance has been consistent since 2008 until end of 2012.

**Conclusion:** Initiation of the VAP Bundle with sustained improvement in compliance is associated with a significantly reduced incidence of VAP in ICU patients. Regular team meetings to discuss the compliance issues and brainstorming appropriate solutions resulted in a consistent improvement in the VAP rate.

<http://dx.doi.org/10.1016/j.ijid.2014.03.1288>