Libyan International Medical University

Faculty of Basic Medical Science

**Multidrug Resistant Acinetobacterbomanni in Intensive Care Unit Among Different Hospital In Benghazi**

**Submitted by:** Aisha Hassan Hussein Mohamed Elfaitoure second year Faculty of Basic medical Science , Libyan International Medical University

**Supervisor:** Dr. Ghanem

**Date of submission:**3\5\2018

**This report Submitted to the block .RES**

**Abstract**

The dangerous of the presence of multidrug resistant Acietobacter boamannii in intensive care unit have been studied in different hospital around the world. presence of Acietobacter boamannii was associated with lung and respiratory system resalts in sever pneumonia and mortality for the patient under medical devices such as ventilator. the aime of this study were to detect the prevalence of Acietobacter boamannii in different hospitals in Banghazi area to study the sensitivity test by antibiotic available in the Libyan hospital and provide sach in for mation for all clinicians.

**Introduction**

*Acinetobacter baumannii* is a pathogenic species of bacteria whose spread has recently gained worldwide attention, most notably after outbreaks in United States military hospitals in Iraq and Afghanistan. The alarming rate by which *Acinetobacter baumannii*  has attained resistance to most classes of known antibiotics poses a great threat to most infection.  *Acinetobacter baumannii*  can rapidly modify transmembrane proteins and efflux pumps to prevent current antibiotics from penetrating its inner membrane and executing their mechanism of action (Smith.*et al;*2007) .

**Discussion**

I compered between this study and Tree studies.showed that the rate of the *A.baumannii* isolates was high in different parts of Benghazi hospitl during( jun-oct 2013) (33.3%) in ICU unit.

* **First study**

studies.showed that the rate of the *A.baumannii* isolates was high in different

parts of Benghazi hospitl during( jun-oct 2013) (33.3%) in ICU unit similar

results was fownd by Franka., *et al* ; 2012 thy reported that percentages of

*A.baumannii* (29.8%) at three hospitals in Tripoli,Libya .1

* **Second study**

This study showed that the most frequent of *A.baumannii* pathogens derived from samples were Tip of suction (24.2%) , Nasal (17.2%) ,Fullycatheter (17.2%), E.T.T (15.8%), Surfaces (11.1%),Mouth(7.3%), This means that the respiratory system include the highest percentages of the *A.baumannii* isolates similar finding by *Suri et al* as 45.6% respectively in their studies **2**

* **Third study**

*A.baumannii* tested showed high level of resistance to all studied antimicrobials. all of the *A.baumannii* isolates were also highly resistant to third -generation cephalosporins (ceftriaxone and ceftazidime) .the results of antibiotic susceptibility testing similar results were observed by Jiurg.XF,*et al*;2005.**3**

**Conclusion**

This study shoed that the rate of the *Acinetobacter baumannii* isolates was high percent and high level of resistance to studied antimicrobials.

.

**Recombination**

Emergence and spread of *Acinetobacter baumannii* species, resistant to most of the available antimicrobial agents, is an area of great concern. There is an urgent need to enforce infection control measures and antimicrobial stewardship programs to prevent the further spread of these resistant Acinetobacter baumannii species and to delay the emergence of increased resistance in the bacteria

**References**

1- Franka EA, Shembesh MK, Zaied AA, El-Turki E, Zorgani A, Elahmer OR, et al. Multidrug resistant bacteria in wounds of combatants of the Libyan uprising. J Infect. 2012; 65: 27981

2- Suri A, Mahapatra AK, Kapil A. et al Acinetobacter infection in neurosurgical intensive care patients. Natl Med J India 2000; 13:296-300.

3- Jiang XF, Han LZ, Yuan FY, Jiang YF, Liu Y, Ni Y, Lu Y, Hong XH: Double inhibitor parallel inhibit disk test to effectively analyze ESBLs in Enterobacteriaceae isolates. Chin J Lab Med 2005, 28:1018-1021.