Prevention of MDR (Multidrug Resistant) GNO (Gram-Negative Organisms) in the Care of the Surgical Patients- Preoperative, Intraoperative, and Postoperative Care

Rebecca J. Murphy RN, MSN, CNOR
rebeccamurphy628@comcast.net

I. Introduction & Significance
   a. Causing significant concern for ICPs & HCWs
   b. Not yet at the forefront of government efforts
   c. At risk patients require specialized infection control interventions
   d. Surgical patients are a subset of patients that are at high risk

II. Antibiotic Resistance
   a. Antibiotics discovered in the 1930’s
   b. Antibiotic classes
   c. GNOs are able to multiple quickly and therefore can develop resistance rapidly

III. Antibiotic Pipeline
   a. Small number of effective antibiotics and the slow, limited research and development of new antibiotics

IV. Why has resistance emerged?
   a. Inappropriate prescribing
   b. Inappropriate use
   c. Inappropriate use in agriculture

V. MDRO-GNOs
VI. Klebsiella
VII. Acinetobacter baumannii
VIII. Pseudomonas aeruginosa
IX. Escherichia coli
X. Risk Factors
   a. Age
   b. Recent antibiotic treatment
   c. Presence of an indwelling device
   d. Co-morbid chronic conditions
   e. Admission to an ICU
   f. Mechanical ventilation
   g. Shortage of nursing staff

XI. Prevention
   a. Surveillance
   b. HH
   c. Environmental cleaning
   d. Contact precautions
   e. Cohorting patients
   f. Cohorting nurses
   g. Unit closures
   h. Education
XII. Preoperative Prevention
   a. Id patient isolation status and organisms
   b. PPE
   c. Transporting
   d. HH and contact precautions
   e. Environmental cleaning

XIII. Intraoperative Prevention
   a. Last case
   b. Contact precautions
   c. HH
   d. Antibiotics given within 60 mins of incision
   e. Surgical prep
   f. HCW changeover kept to a minimum
   g. Change scrubs after case
   h. Environmental cleaning

XIV. Postoperative Prevention
   a. Transfer directly back to the ICU
   b. PPE
   c. Hand-off communication
   d. Transporting with PPE
   e. Environmental cleaning

XV. Significance for Nursing Practice
XVI. Results of ineffective Antibiotics
XVII. Why should we be concerned?

References


Snyder, G. et al.  (2008).  Infection Control Hospital Epidemiology. 29,584.