issued a warning about the emergence of Candida auris; which is mostly multi drug resistant and has been associated with severe infections, and hospital outbreaks.

We present 4 cases associated with the isolation of C.auris, in National Guard Health Affairs (NGHA), Riyadh, KSA.

Cases:

- A 68 year old male was admitted to NGHA as a case of sub-acute massive stroke with respiratory failure, his respiratory and urine cultures grew pure Candida auris.
- A 54 Y/O male who was transferred to our institute from another hospital with deep intracerebral hemorrhage, whose urine cultures grew C.auris.
- A 61 Y/O male admitted to NGHA with lung carcinoma; C.auris was isolated from urine cultures.
- A 78 Y/O male, transferred to NGHA as a case of pulmonary and spinal TB; C.auris was picked up from a surveillance culture, which was implemented by IP&C at NGHA after the isolation of C.auris from other patients.

Method: All isolates that are germ tube negative, growing at 37degree on SDA, negative for pseudohyphae on Corn Meal Agar, were identified as Candida auris using VITEK® 2 system (bioMérieux, France), version 8.01, following the CLSI guidelines.

MALDI-TOF, version 3.0 failed to identify.

Conclusion: C.auris is becoming of clinical significance in hospitals, given concerns to its resistance, transmission and misidentification, infection control precautions should be applied to patients colonized or infected with Candida auris.

C.auris remains an unnoticed pathogen in routine microbiology laboratories, as 90% of the isolates characterized by commercial identification systems are misidentified as C. haemulonii.

https://doi.org/10.1016/j.jiph.2018.10.107

Two-Tiered Approach to Control Multidrug Resistant Organisms Infections Using Centers Of Disease Control (CDC) Based Care Bundles in King Abdulaziz Hospital, Jeddah

H. Joharjy [1,*], R. Khalifa [1,2], H. Alghamdi [1], B. Ismail Saleh [1,3], H. Assi [1]

[1] *King Abdulaziz Hospital*
[2] *Faculty of Medicine, Ain Shams University*
[3] *Faculty of Medicine, Al Azhar University*

Background: Multidrug-resistant organisms (MDROs) are a global threat that has severe impact on morbidity and mortality. Successful prevention requires administrative leadership and human resource commitment. This gave rise to the two-tiered approach for MDROs control. In the first tier are the baseline measures that define the problem. For uncontrolled problems, additional actions are selected from the second tier interventions. Purpose: To control MDROs incidence through implementation of a CDC based two-tiered MDROs control and antimicrobial stewardship programs.

Methods: The project was planned through PDCA four phases approach starting November 2017-February 2018 (figure1). MDROs incidence was calculated according to CDC MDRO & Clostridium difficile Infection Module, January 2017 as: number of hospital acquired infections (HAIs) by MDROs per thousand patient days. Phase1: Root Cause Analysis and surveillance was performed to identify the problem (figure2). Antimicrobial resistance was determined using Phoenix and MicroScan WalkAway systems. The methicillin-resistant Staphylococcus aureus DNA was detected by automated BDMax instrument using BDMax MRSA XTkit (Quebec, Canada). Phase2: Baseline measures such as on-job training regarding CDC based ventilator, central line, urinary catheter, surgical site and MDROs care bundles (figure3). Monitoring of hand hygiene compliance, surface disinfection, contact isolation precautions, HAI surveillance and antibiotic use. Phase3: Intensified measures were started in ICU as close auditing for link nurses participation in care bundles implementation and active surveillance. Phase4: Follow up measures and strict implementation of care bundles. Control measures were extended till December 2018.

Results: Overall MDROs incidence was reduced from 11.9 to 6.4/1000 pt days. ICU MDROs incidence was reduced from 64.4 to 12.9/1000 pt days (figures4&5). Follow up monitoring showed overall and ICU MDROs incidence of 6.8 and 10.8 per 1000 pt days respectively.

Conclusions: Intensified measures in ICU revealed marked reduction of MDROs incidence compared to baseline measures implemented in all departments.

https://doi.org/10.1016/j.jiph.2018.10.108

Knowledge, attitude and practice towards droplet and airborne isolation precautions among pre-clinical medical students

F. Jahan

Oman Medical College

Background: Airborne transmission refers to infectious agents that are spread via inhalation droplet nuclei (residue from evaporated droplets) containing infective microorganisms that remains suspended in the air for long periods of time. They infect others via the upper and lower respiratory tracts.

Objectives: To obtain information about the knowledge, attitude and practices in regard to airborne infection related precautions among the undergraduate students.

Method: A cross sectional study conducted at OMC Sohar. Students in preclinical years asked to participate by simple random sampling. Data was collected by a self-filled questionnaire. Data analyzed in SPSS for frequencies and percentage.

Result and Discussion: 73 students participated in the study, 97% were female. 4th Year (Mean rank-49.07) and 5th Year (Mean rank- 29.05) student's responses differ significantly ($p < 0.001$) in their responses about statements regarding knowledge about airborne germs and infections. 4th Year (Mean rank - 45.34) and 5th Year (Mean rank – 31.5) student's responses differ significantly (p-0.005) in their responses about statements regarding diseases those spread through inhalation of contaminated air. 4th Year (Mean rank-46.36) and 5th Year (Mean rank- 30.83) student's responses differ significantly (p-0.002) in their responses about statements regarding safety measures and airborne germs transmission prevention. 4th Year (Mean rank – 43.81) and 5th Year (Mean rank-32.51) student's responses differ significantly (p-0.024) in their responses about statements regarding knowledge about personal protective equipment's.

Conclusion: Students in pre-clinical years has insufficient knowledge regarding droplet and airborne infection and isolation precautions, however the responses are significantly differ in 4th and 5th year medical students.

https://doi.org/10.1016/j.jiph.2018.10.109