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How fast we are? Consultation of and from infectious diseases department, a retrospective observational study

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Background: Because of the antibiotic policy in Turkey,most of the IV antibiotic usage is restricted to signed confirmation of infectious diseases(ID) specialist.The number of the consultations has been high because of this policy. Here we tried to detect the technical details of consultations of and from ID department in a atertiary care hospital.

Methods & Materials: The study was held in a tertiary care hospital in Ankara,Turkey,between September and December 2013.Two branches were planned to run the study,in one branch the ID consultations to other clinics for 100 patients evaluated while in the second branch the consultation demands from other clinics to our ID in-patients for a 3 months period evaluated retrospectively.The time(in hours) from the demand of the consultation(DC) to seeing and closing/signing of the demand after seeing each patient was defined as consultation time(CT).

Results: *ID consultations to other departments*

The goal of a total of 100 patients'consultations was achieved within three days.The mean of CT was 1.8 hours(min1 max 8 hours);70% of the all patients were seen by our ID consultant within one hour of DC.Of all,21 DC was just for the signed confirmation of an antibiotic which was already started by the owner clinic.In 68(68%) consultations a new antibiotic was started or a dose adjustment was made.In 90(90%) patients the clinics obey our suggestions like taking blood culture.Only 17 patients(17%) had culture results prior to ID consultation.Re-consultation by our ID department was needed for 8(8%) patients.

Consultation demand from other clinics to ID patients

Table 1
Consultation demand from other clinics to IO patients (n=72 patients)

Consultation umber for each patient, n, median (min-max)	5(1-24)
Total number of the Consultations, n	278
Consultations from internal departments*, n(%)	195 (70.1)
Consultation time, hours, mean (min-max)	3.2 (1-12)
Consultations from surgical departments**, n(%)	83 (29.9)
Consultation time, hours, mean (min-max)	3.5 (1-8)
Need for a surgical intervention, n(%)	10 (13.9)
Need for a re-consultation, n(%)	53 (73.6)
Reasons for re-consultation, n(%)	
Not coming to first demant	3 (5.7)
Because of new laboratory results	32 (60.4)
Inadequate response or patient was changed for the worse	18 (33.9)

* Internal departments: Internal medicine, pulmonology, cardiology, dermatology,neurology, psychiatry

** Surgical departments: Cardiovascular surgery,general surgery, orthopedics, urology, gyneacology, neurosurgery, ophtalmology, otorhinolaryngology, plastics and reconstructive surgery

Seventy-two in-patients were followed in ID department within three months.The median of hospitalization was 10(2-21) days.A total of 278 consultations from different departments were asked.The details were given in Table 1.

Conclusion: It seems that the ID consultant is working faster.Re-consultation need was 8% for an ID consultant while it was 74% for other departments,the ID consultant closes the file more efficiently or the ID inpatients are severe patients who need many consultations from other departments?The issue is needed to be explained with further studies.

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Multiple approaches to decrease the rate of MDROs colonization in intensive care unit at tertiary care hospital in Saudi Arabia

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Background: MDROs infections can cause serious diseases and mortalities, and colonized or infected patients may serve as reservoirs and lead to outbreaks. The mean rate of MDROs colonization was 1.73/1000 patients days in 2011 and increased progressively to 9.35/1000 patients days in 2012 with a peak of 18.85/1000 patients days in November 2012. We planned to decrease the rate of colonization by 75% in 2013. Therefore a quality improvement initiative group by the Infection Control Department (ICD), Nursing and Housekeeping was launched to implement the environmental hygiene stewardship program.

Methods & Materials: The initiative group used a quality improvement model called FOCUS–PDCA. A root cause analysis was done to identify the issues behind the increased rate of MDROs colonization. The rate was 18.85/1000 patients days in November 2012 and this was considerably high due to low of compliance with isolation guidelines and hand hygiene, new untrained housekeeping staff, the use of low level surface disinfectants with shortage of cleaning materials, lack of regular monitoring process for cleaning and disinfection and shortage in isolation rooms. During December 2012, the interventions were implemented which include extensive infection control education for all healthcare workers and housekeeping staff, hand hygiene improvement campaign, provide enough cleaning materials, use broad spectrum disinfectant (Hydrogen Peroxide with silver stabilizer), management of isolation rooms and monitoring the effectiveness of the cleaning process by using Clean-Trace Surface Protein (Allergen) test. The (ICD) continued to screen and culture all patients in the MSICU for colonization on weekly basis to detect any new cases of MDROs colonization.

Results: The multi-approach intervention was very effective in reducing MDROs colonization rates. The rate was 9.35/1000 patients days in 2012 (before the intervention) and decreased to 2.11/1000 patient days in 9 months in 2013 (after the intervention). The project had achieved a 77.5% reduction than we planned for.

Conclusion: Environmental Hygiene Stewardship program as a multi approach and comprehensive package of interventions that incorporated advanced cleaning technology, health education for

all staff including housekeeping, and improved communication and feedback between ICD, MSICU and Housekeeping is very successful to reduce MDRO colonization.

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Burkholderia cepacia nosocomial infections in a tertiary hospital in western India–a six month surveillance

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Background: *Burkholderia cepacia* is a ubiquitous, gram negative nosocomial pathogen with a potential to cause fatal infections in the intensive care units. The data on the types of nosocomial infections and drug susceptibility patterns of *B. cepacia* is scarce in India. The main aim of this study was to evaluate the epidemiology of *B. cepacia* infections in our hospital.

Methods & Materials: This study was conducted in a tertiary care institute in western India. A retrospective analysis of the incidence, clinical characteristics, antimicrobial susceptibility patterns and clinical outcomes of nosocomial *B. cepacia* infections was conducted.

Results: A total of 21 cases of nosocomial *B. cepacia* infections were included in the study over a period of six months. Out of total 21 patients, twelve(12) were males and nine(9) females. *B. cepacia* was identified from 28.2% of nosocomial isolates over six month period. The most common nosocomial infection in our study was blood stream infection (61.9%), followed by surgical site infections(14.3%), urinary tract infections (9.5%) and pneumonia(4.7%). The unique feature of drug susceptibility was the high level of resistance to carbapenems, piperacillin-tazobactum and co-trimoxazole, which was reported as 100%, 91% and 76%, respectively in our study. Majority of the isolates were susceptible to cefepime(100%), a 4th generation cephalosporin, which emerged as the antimicrobial of choice for *B. cepacia* infections in our study.

Conclusion: *Burkholderia cepacia* is a emerging nosocomial pathogen in intensive care settings with a potential to produce fatal infections. Multidrug resistance strains with high MICs to carbapenems and cotrimoxazole, may increase mortality in view of limited therapeutic options. Cefepime, a 4th generation cephalosporin, may be a viable therapeutic option in presence of multidrug resistance.

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Streptococcus salivarius meningitis post spinal procedure: Diagnosis by 16S and a call to better aseptic practices

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Background: We report two cases of *Streptococcus salivarius* meningitis diagnosed by 16S PCR. *Streptococcus salivarius* is part of the normal flora of the oral cavity. It is an uncommon cause of meningitis. Most cases are iatrogenic, related to neurosurgical procedures or CSF leaks. The transmission from physician to patient has been proven in the literature, most likey in droplet form during spinal procedures. The recent increase in the number of cases prompted the Healthcare Infection Control Practices Advisory Committee to recommencd wearing surgical masks for all spinal procedures. The CDC followed suite recommending the use of face masks at all times when performing spinal injections.

Methods & Materials: A 17 year old female received a combined spinal-epidural anaesthetic during labour. There was an initial unsuccessful attempt via the L3/L4 space and a subsequent successful pass at the L2/L3 space. Three hours post-delivery, the catheter was removed. Within 24 hours, the patient showed signs of meningitis. Subsequent lumbar puncture revealed a white cell count of $>7000 \times 10^6$ cells/L. As the patient had been started on empiric antibiotics, the culture yielded no growth.

A 51 year old female presented with symptoms of meningitis within 24 hours after a lumbar facet joint injection for chronic lower back pain in a musculoskeletal clinic. A lumbar puncture was performed on presentation and indicated a white cell count $>11{,}000 \times 10^6$ cells/L but did not culture any organisms.

Results: Meningitis was rapid in onset after spinal procedures with a high CSF white cell count and polymorphonuclear predominance. 16S results confirmed the presence of *S. salivarius*. The 16S result guided therapy and both patients made good recoveries. While no direct source of the infection was sought, infection control procedures were highlighted.

Conclusion: *Streptococus salivarius* is an uncommon cause of meningitis but should be suspected following spinal procedures. The source may be endogenous or exogenous from the hands or face of the health care worker administering the spinal procedure. Ongoing education of the medical profession is required regarding the importance of wearing a surgical mask for spinal procedures.

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