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Role and Important Staff Hands and Low and High Contact Hospital Surfaces to Produce and Controlling Nosocomial Infections

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1-MS of Microbiology, Islamic Azad University Shahreza Branch, Membership of Young Researchers Club. Isfahan. shilla.jalalpoor@yahoo.com
2-Prof., Dept of Biology, Faculty of Basic Sciences, University of Alzahra (Tehran), Tehran.
3-Prof., Dept of Biology, Faculty of Sciences, University of Tehran, Tehran.
4-Associate Prof., Dept of Biology, Faculty of Sciences, University of Isfahan, Isfahan.

Abstract

Introduction: Nosocomial infections (NIs), also called hospital-acquired infections are infections acquired during hospital care which are not present or incubating at admission. Nosocomial infections remain a major global concern in all countries. Health care settings are an environment where both infected persons and persons at increased risk of infection congregate. Patients with infections or carriers of pathogenic microorganisms admitted to hospital are potential sources of infection for patients and staff. Staff hands and hospital surfaces have important role in produce and controlling nosocomial Infections.

Material and Method

Related papers to importance of staff hands and hospital surfaces in nosocomial infections were extracted of articles in Pubmed, Elsevier Science, and Yahoo from 1995 to 2010 years. For this study key words which were search include hospital surfaces, staff hand, nosocomial infection and infection control.

Results

About importance of staff hands and hospital surfaces in nosocomial infections in all of similar original and review articles, there is consensus that control of Bacterial population in these sources, lead to reduce and control of transfer and spread of Bacterial in hospital and finally nosocomial infection.

Conclusion

Hospital surfaces can serve as reservoirs of potential pathogen Bacteria and have important role in infection chain. Bacteria on hospital surfaces have low potential to spread. Staff hands have very contact with hospital surfaces, especially high contact surface, and are more sources to transmission and spread Bacteria into hospital. Staff Hand and hospital surfaces hygiene has been considered to be the most important tool in NI control.

Key Words: Hospital Surfaces, Staff Hand, Nosocomial Infection, Infection Control

In vestigation of contamination of traditional cheeses of Lighvan with E.coli and in Coliforms Maragheh

ABSTRACT

Background and objective: milk and its products, especially the cheese, provide the large part of the food's needs for human. This product provides good condition for transferring of disease to human. This study was conducted to determine the frequency of E.coli and/or coliform contamination of Tabriz lighvan inMaraghe.

Materials and METHODS: in this descriptive cross sectional study, during six months, 100 samples of Tabriz lighvan cheese were in vestigated in Maraghe food and cosmetics laboratory.the samples were in vestigated for contamination with E.coli and Coliform according to Iranian standard guideline. The isolated bacteria were further identified by conventional bacteriologic tests.

Results: of the 100 samples, 98% were contaminated with coliform , 50%contaminated with E.coli , in44% the intensity of pollution was very high, so the numbers of Pergenes in its Pelits were innumerable,also.66% of the samples have the PH higher than limit standard in Iran.q

Conclusion: Result of this study showed that frequency of traditional cheese lighvan which were contaminated with E.coli and coliform was significantly higher than other surveys.

Key words, E.coli , coliform, traditional cheese ,PH

Rapid identification of Salmonella in dairy products by P-CEIA

Shokri R[1*], Tabaraei B[2], Hatami S[1], Nilchizade Rahbar O[1]

Abstract:

Background and Objectives: The aim of this study is to use P-CEIA (Polymixin-Coated Polyester Cloth in EIA) method for rapid isolation of salmonella in dairy products. While other methods such as bacterial culturing and ELISA (ab-EIA) are time consuming and expensive, P-CEIA has been utilized for this study.

Materials and Methods: Different dilutions of S.typhimorium Ra-30 in Buffered peptone water (BPW, pH=7.4) and also ten samples (milk and butterfat) have been studied by two P-CEIA and ab-EIA methods.

Results: Analyzing of findings indicates that by using the standard strains of S.typhimorium Ra-30, sensitivity for P-CEIA method was 106 cfu/mL while ab-EIA was estimated 105 cfu/mL. This sensitivity was balanced after heat treatment by using the sodium deoxy-cholate as a detergent five and three positive results were allocated to unknown milk and butterfat samples which were tested with Ab-EIA and also six and three positive results were allocated to unknown milk and butterfat samples which were tested with P-CEIA. In addition to the P-CEIA method requires 14 hour process time less than ab-EIA method.

Conclusion: Analyzing of findings indicates that P-CEIA method is more privileged cause of its firm-inexpensive and stable process for Salmonella detection in dairy products.

Keywords: Salmonella, P-CEIA, Polymixin-B

Antimicrobial activity Kefir on different time fermentation

Abstract:

Introduction:

Kefir is a probiotic mixture of bacteria and yeast originating from Qafqaz region.The Kefir grain contain both *Lactic acid* bacteria (*Lactobacillus,Lactococcus,Leuconostoc,Acetobacte and Streptococcus spp.*) and yeast (*Kluyveromyces,Torula,Candida and Saccharomyces spp.*). Kefir is claimed to have therapeutic effect.This study looked at the antimicrobial activity of Kefir on *Pseudomonas aeruginosa***.**

Methods: The antimicrobial activity of Kefir extract were determined on *Pseudomonas aeruginosa*
(ATCC 27853) and on those isolated from burned patient. The MIC was defined as the lowest antimicrobial concentration able to completely inhibite bacterial growth up to 24 h. MIC values were determined by microdilution method. The lactic acid and acetic acid contents of the Kefir extracts were determined by reverce-phase HPLC.

Result: The result showed that the highset antimicrobial activity of Kefir exteract on *Pseudomonas aeruginosa* (ATCC 27853) and the burned patient isolate ranged from 250 mg/mL(MIC) to 250 mg/mL(MBC) on time 96h.

Discussion: The Kefir exteract showed significant antimicrobial activity on *Pseudomonas aeruginosa*
(ATCC 27853) and the clinical isolate of *Pseudomonas aeruginosa*.

***Keywords**: 1- Kefir, 2- Antimicrobial activity, 3- fermentation.*

Determination of HBV-DNA copies in serum and cerumen in chronic hepatitis B patien (CHB)by RealTtime PCR method and Its relationship with some epidemiological variables

Eskandar Gholami Parizad (MSc) ,Elaheh Gholami Parizad(MSc)*
,Ali Delpisheh(phD),Mostafa Nikfar

Ilam University Of Medical Science,Department Of Health

Abstract:

Background: Chronic hepatitis B is most common chronic viral infection in the human. Nearly a third of the world already infected with hepatitis B were more than four hundred million people worldwide are HBV carriers, and of these approximately forty million people and cirrhosis of the liver due to the sixty million people have died hepatocellular carcinoma. Outbreaks in Southeast Asia than other regions further. Is estimated that so far twenty-five million people in Iran are infected HBV infection and about three percent of HBV carriers exist in Iranian society.

HBV-DNA levels in different body fluids including serum, cerumen, saliva and other immunological factors, individual and depends on some epidemiological variables. The first study to determine the amount of HBV-DNA copies in serum and cerumen its relationship with epidemiologic factors in Iran population.

Methods: In this study, 70 patients with chronic hepatitis B in the age group 20-40years, all were positive for HBsAg were selected as samples. In the study were used to determine the amount of HBV-DNA serum and cerumen by molecular methods Real time PCR (detection system Biorad) and diagnostic kits (aj Roboscreen - Germany).

Results: In this study, 54/ 3 percent of male study group and 45 /7 percent were women. 100 percent of patients at least one year of diagnosis Abtla'shan to hepatitis B was passed. 61 (87/2%) of patients had HBV-DNA to cerumen. 19 (27 %) and 51 treated patients (73 percent) had not received any medication. 58 (83%) of patients were married. Average copies ml HBV-DNA has been in men cerumen$8/73\times10^{6}$ and women's $7/44\times10^{6}$. Hmogenety test average variance in age groups showed a significant difference between the mean copies cerumen the age groups studied there

Conclusion: The use of quantitative molecular methods can conditions CHB patients in different stages of disease to determine accurately. Type of discharge the patient, including serum, Srvmn, saliva, etc. as well as some epidemiological variables such as sex, drugs, and immune system. The amount of HBV-DNA copies are affected, though some might consider testing the statistical differences are not significant.

Key word: HBV-DNA,Serum,Cerumen,CHBV,Epidemiologic,Real-Time PCR,Ilam.

**Corresponding Author:Elaheh Gholami Parizad/elahehparizad@gmail.com*
Department of Health,Ilam University of Medical Science/telfax:08412227103

Antibiotic resistance pattern of common etiological agents of bloodstream infections isolated from patients

Hamid vaez[1,2]-Samira khosravi[2]-Ebrahim soleymani[3]
1-Department of microbiology ,Golestan university of medical science
2-Besat hospital, Microbiology laboratory
3- Besat hospital,Pathobiology laboratory
corresponding author :Hamid vaez Department of microbiology ,Golestan university of medical science.
Mobile: 9127230225 E.mail:vaezhamid84@gmail.com

Abstract:

Background and objective:Bloodstream infections(BSI) are dangerous and if not treated appropriately will be accompanied by high mortality.the aim of this study was to determine the frequency of different etiological agents of BSI and their resistance to commonly used antibiotics.

Material and Method: This study performed by 129 positive blood culture samples collected during 2009 to 2010 from patients of tehran besat hospital.Antibiotic susceptibility testing was performed by using disk diffusion method as per *clinical and laboratory standards institu(*CLSI)guideline.Data analysed by Chi-square test and SPSS soft ware.P value of <0.05 was determined as significant.

Results: The most common causes of BSI were coagulase-negative staphylococcus (CONS) and *E.coli 45(34.9%),38(29.5%)* respectively.Infection*s* with *proteus vulgaris was rare2(1.6%).*prevalence of gram negative infections in comparison with gram positive infections was(1.58:1).The highest resistance was demonstrated as:Penicillin 73.6%-Ampicillin66.6%-Tetracyclin58.9% . the highest susceptibility was demonstrated as Gentamicin and Imipenem 68.3%,65.9% respectively.

Conclusion:BSI caused by gram negative bacteria is 1.5fold more than gram positive bacteria. In our hospital*CONS* and *E.coli* are more common etiological agents of BSI(64% of all infections).Vancomycin are suitable antibiotic for treatment of *CONA* and *S.aureus* infections.

Keywords:Bloodstream infections,Antibiotic resistance,Bacterimi,Septicemia

An overview on present situation babesiosis and theileriosis and their distribution of ticks in Iran

Hamed Kalani, Mahdi Fakhar, Abdostar Pagheh

Abstract:

Background and Objectives: Theileriosis and babesiosis are two important parasitic diseases causing economic detriment in Iran and the world. Although, abundant and scattered investigations up to now were performed on babesiosis and theileriosis and their vectors by researcher in Iran but the present situation of these are not clear. The aim of this study was to investigate publications has been published regarding these diseases and the vectors in Iran.

Methods: This ,Systematic Review ,study was conducted using bibliographic records from the different databases and citation indexes restricted to a periodic domain during 1960-2010 and Iran regarding such as Google Scholar, Pubmed, Sciencedirect, IranMedex, ISI, Magiran, etc. Moreover, available abstract books of national and international congress were also evaluated

Results: The results of published papers showed that seven genus of hard ticks as carriers of *babesia* and *theileria* are present in Iran, and the most studies on the distribution of hard ticks has frequently been done in littoral areas of Caspian Sea. The majority of studies have been focused on sheep, and subsequently the most common species of the parasites were T. lestoqurdi and B. ovis and also restricted survey was done on prevalence of human babesiosis in Iran.

Conclusion: Our result showed ,despite the different weather conditions, there is no difference between the prevalence of the diseases in different ecological zones of Iran. We suggest that according to the high distribution of hard ticks throughout Iran, this issue requires further studies regarding typing of different species of babesia and theileria parasite and their hard tick as vectors using novel techniques in different ecological zones of Iran.

Key word: Babesiosis , Theileriosis, Ruminants, Human, Hard ticks (Ixodidae), distribution ,Iran.