



Comparison of Clinical and histological findings between patients with rectal and cecal cancer

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Abstract: *Background:* Genetic and environmental factors and social factors that determine health and socio-economic status can probably be effective in the prevalence, incidence, mortality, and survival rate of colorectal cancer. Therefore, the present study was conducted to compare the findings of patients with rectal cancer and cecal cancer. *Materials and Methods:* This study was of a cross-sectional type, it was performed on all patients who underwent colonoscopies in Ayatollah Rouhani and Shahid Beheshti Hospitals in Babol city (2007-2017). The diagnosis of rectal and cecal cancer was performed on patients, too. The data collection tool included a checklist of demographic characteristics, questions about symptoms, time of visit, and duration of symptoms. Data were analyzed statistically using statistical package for the social sciences (SPSS)-19, frequency distribution, Analysis of variance, t-test (p<0.05). *Results:* Among 117 cases of colorectal cancer, the files of 97 patients (average age: 59.69 ± 14.11), including 33 cases of cecal cancer and 64 cases of rectal cancer, were examined. Among the patients, 55 (56.7%) were male and 42 (43.3%) were female. The A relationship between gender (p=0.04) and smoking (p=0.041) with rectal cancer was observed. Male gender (OR=2.42; CI: 1.03-5.71) and smoking (OR=2.70; CI: 7.14-1.03) have been associated with an increased risk of rectal cancer. Rectal bleeding (OR=2.78; CI: 6.67-1.16) in patients with rectal cancer (64.1%) was significantly (p=0.021) more than in patients with cecum cancer (39.4%). The prevalence of abdominal pain (OR=2.60; CI: 1.08-6.20) in cecum cancer (36.4%) was significantly (p=0.031) higher than in rectal cancer (26.6%). Poorly differentiated histology grade (OR=4.11; CI: 1.31-12.93) was seen more in cecum cancer (27.3%) than in rectal cancer (10.9%). The average age of patients with cecum cancer (63.67 ± 14.82) was higher than that of patients with rectal cancer (57.64 ± 13.40) (P=0.041). *Conclusion:* Summary of the overall findings and the importance of the study (Times New Roman, font size12). *Keywords:* Rectal Cancer, Cecal Cancer, Patients Findings



Investigating the role of co-infections between Epstein-Barr virus (EBV) and Human Papillomavirus (HPV) types 16 and 18 in cervical cancer development

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Abstract: *Background:* The majority of newly diagnosed instances of cervical cancer are caused by high-risk human papillomavirus types 16 and 18 (HPV-16 & HPV-18). Additional elements must be present for HPV to induce cervical cancer. One of these factors can be simultaneous infection with other cancer-causing viruses. The aim of this study is to determine the prevalence of co-infection with EBV and human papillomaviruses HPV-16 & HPV-18 in women with intraepithelial neoplasia and squamous cell carcinoma of the cervix and compare it with the non-cancerous control group. *Materials and Methods:* The present study was conducted on 258 cervical samples, related to paraffin (204 samples) and fresh (54 samples) tissues. Viral load of viruses by absolute quantification method and by Real Time-PCR technique in chronic cervicitis samples (control group) (141 samples) and cervical intraepithelial neoplasia (CIN I) samples (26 samples), CIN II (29 samples), CIN III (36 samples) and cervical cancer (26 samples) were evaluated. *Results:* In the present study, HPV-16 was prevalent in the control group (19.85%), CIN I group (34.61%), CIN II group (51.72%), CIN III group (69.45%), and SCC group (73%). HPV-16 significantly increases the chance of having CIN II, CIN III, and SCC compared to the control group (P<0.001). The results of Bayesian logistic regression analysis showed that infection with HPV-18 increases the risk of CIN II (P=0.008) and CIN III (P=0.013) compared to the control



Demographic, Histological, and Clinical Factors on Patients Suffering from Peptic Ulcer Infected with *Helicobacter pylori*

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Abstract: Background: *Helicobacter pylori* (*H. pylori*) is a prominent factor causing peptic ulcers in adults and more than half of the world's population. The prevalence of this infection and histological and clinical characteristics are dependent on the different risk factors according to geographic region and demographic characteristics. In this study, the effect of demographic, histological, and clinical factors on peptic ulcers in patients with *H. pylori* infection was investigated. Materials and Methods: The current study was an analytical cross-sectional study. All patients who were referred to the endoscopy unit of Ayatollah Rouhani Hospital and Shahid Beheshti Hospital (Babol city, Iran) during 2006-2020 and whose gastric pathology samples were positive for *H. pylori* were included in the study. The two groups of patients with and without peptic ulcer disease were compared in terms of demographic, clinical, endoscopic, and histological features. Collected data were analyzed in SPSS v.24 software and Fisher's exact tests, and Pearson's correlation coefficient was performed (p0.05) (MUBABOL.HRI.REC.1399.245). Results: In assessing the severity of *H. pylori* infection, 162 (49.8%) patients had mild, 109 (33.5%) moderate and 54 (16.6%) severe infections. Finally, 325 patients were included in the study, of which 166 (51.1%) were male and 159 (48.9%) were female. The mean age of patients was 52.20± 14.54 years. 165 (50.80%) had a peptic ulcer and 160 (49.2%) had no peptic ulcer; 80 (24.6%) patients had a gastric ulcer and 102 (31.4%) had a duodenal ulcer. 47 (14.5%) patients smoked and 17 (5.2%) were alcohol users. 24 (7.17%) of patients with nausea and 24 (7.17%) of patients with dysphagia were examined endoscopically. Of patients with peptic ulcer, 66 (41.2%) were female and 94 (58.8%) were male. Of patients without peptic ulcer, 93 (56.3%) were female and 72 (43.7%) were male. Significant differences were found between females and 72 (43.7%) males (p=0.008). No significant differences were found between other variables, between patients with peptic ulcer and those without peptic ulcer (p0.05). Conclusion: The results of this study showed a high frequency of peptic ulcer in patients with *Helicobacter pylori* infection and the Peptic ulcer was significantly more common in men than women. The above information can be used to guide internal medicine and gastroenterologists in approaching patients with *H. pylori*. Keywords: Risk factors, Peptic Ulcer, *Helicobacter pylori*



Antibiotic Resistance of *Acinetobacter* Species Isolated from Patients in Different Wards of Rouhani Hospital in Babol

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Background and Aim: The study of antibiotic resistance in bacteria is very important in the management of treatment and control of infectious diseases. The aim of this study was to determine the level of bacterial contamination and antibiotic resistance of *Acinetobacter* species isolated from patient samples in different wards of Rouhani hospital in Babol.

Methods: The information of patients from the hospital information system of Rouhani hospital in Babol in the first 6 months of 2021 was analyzed. *Acinetobacter* was detected by microbiological laboratory methods and microbial susceptibility testing was performed by disk diffusion method according to the standard of the Clinical and Laboratory Standards Institute (CLSI). For data analysis, SPSS software version 21 and frequency table were performed (P-value less than 0.05).

Results: Fifthly tow species of *Acinetobacter* were isolated from patients. Antibiotic resistance was as follows; Piperacillin / Tazobactam for 52 isolates (breakpoint: 18-20, resistant: 94.2%, intermediate: 0, sensitive: 5.8%; Confidence interval (CI): 83-98.5). Ceftazidime for 31 isolates (breakpoint: 15-17, resistant: 96.8%, intermediate: 3.2, sensitive: 0; CI: 81.5-99.8). Ceftriaxone for 40 isolates (breakpoint: 14-20, resistant: 100%, intermediate: 0, sensitive: 0; CI: 89.1-100). Meropenem for 52 isolates (breakpoint: 15-17, resistant: 100%, intermediate: 0, sensitive: 0; CI: 91.4-100). Amikacin for 51 isolates (breakpoint: 15-16, resistance: 88.2%, intermediate: 0, sensitive: 11.8; CI: 75.4-95.1). Gentamicin for 1 isolate (breakpoint: 13-14, resistant: 0, intermediate: 0, sensitive: 100; CI: 0.0-94.5). Ciprofloxacin for 52 isolates (breakpoint: 22-25, resistant: 92.3, intermediate: 3.8, sensitive: 3.8; confidence: 80.6-97.5). Trimethoprim / sulfamethoxazole for 1 isolate (breakpoint: 11-15, resistant: 0, intermediate: 0, sensitive: 100; CI: 0.0- 94.5).

Conclusion: High antibiotic resistance was observed in *Acinetobacter* isolated from the samples. The importance of conducting antibiotic susceptibility testing prior to drug administration is effective in the treatment and control of drug resistance.

Keywords: Infection rate; Antibiotic resistance; *Acinetobacter*



Morganella morganii Isolation from Patient Suffering from diabetic foot ulcer with Gangrene

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Abstract: Background: In rare cases, *Morganella morganii* is the cause of infection in diabetic patients with foot ulcers. In this study, two cases of diabetic foot ulcers were investigated, and *Morganella morganii* was isolated from their ulcers. Case Presentation: The first case was a 47-year-old woman with a complaint of diabetic foot ulcer. Osteomyelitis, kidney disorder, and gangrene were diagnosed. Wound cultures grew *Morganella morganii*. One month after the amputation, the patient suffered bleeding, infection and died. The second case was a 65-year-old woman with gangrene-diabetic foot ulcer. Osteomyelitis and kidney disorders were observed in the patient. A wound culture grew *Morganella morganii*. Angioplasty was performed and the patient was discharged (IR.MUBABOL.HRI.REC.1401.083). Conclusion: *Morganella morganii* was separated from a leg wound. The first patient died due to kidney failure, a weak immune system, and antibiotic resistance. Referral, diagnosis, and quick treatment of patients with diabetic foot ulcers are essential. Keywords: *Morganella morganii*, Diabetic foot ulcer, Gangrene



Isolation of *Pasteurella multocida* and bacteria with Pan-drug-resistant to antibiotics and causing nosocomial infection from a patient with multiple sclerosis

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Abstract: Background: *Pasteurella* species are one of the most common pathogenic bacteria common to domestic animals and they are seen more in people with weak immune system. The aim of this research is to investigate a case of a patient with multiple sclerosis in which *Pasteurella multocida* was isolated from his sputum sample. Case Presentation: The patient was a 28-year-old man with multiple sclerosis, who had complained of multiple coughs due to food stuck in his throat. The primary diagnosis was pneumonia and hydropneumothorax and complete collapse of the left lung. The patient's sputum culture after the first visit to the hospital was positive for *Pasteurella multocida*. *Pasteurella multocida* was not found in the second culture of the patient's sputum. In the subsequent cultures of the patient, *Acinetobacter*, *Klebsiella*, *Pseudomonas aeruginosa* and *Citrobacter* were found with extensive drug resistance to all antibiotics. In the secondary CT scan, mild pleural effusion on the left side, pneumothorax, and complete collapse with bronchiectasis was seen. Despite the treatments performed on the patient, the patient finally died of cardiac arrest and bradycardia (IR.MUBABOL.HRI.REC.1401.140). Conclusion: Infection with *Pasteurella multocida* was found in a patient with multiple sclerosis. Also, hospital-acquired infections with drug resistance caused by the weakness of the patient's system appeared in the patient who was hospitalized in the intensive care unit, and finally the patient died. It is necessary to reduce hospital infections along with practical and applicable plans. Keywords: *Pasteurella multocida*, Pan-drug-resistant, nosocomial infection multiple sclerosis



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HIV-Positive Patient, with Concurrent COVID-19 and Cryptococcus Infections, a Case Report

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Background: HIV positive individuals are more prone to secondary and opportunistic infections. This study investigated a case of HIV-positive diagnosed with COVID-19, who infected with *Cryptococcus*. **Methods:** The patient was a 53-year-old woman with COVID-19 symptoms. COVID-19 Real-time PCR, hepatitis C virus (HCV) and HIV tests were performed. Lumbar puncture (LP) was done and cerebrospinal fluid (CSF) glucose and protein evaluated. Temporal artery colour-Doppler sonography and Skull XR was performed. **Results:** Severe tension-type -generalized headache, nausea, and photophobia were the main physical symptoms. COVID-19 was found to be positive. Right axis deviation (RAD) and left bundle branch block (LBBB) were diagnosed. HIV-positive and blood impaired circulation were reported. White blood cells on 6 months prior to referral were 30×10^3 cells/ μ l, but during hospitalization it was decreased to 8.2×10^3 cells/ μ l (2021-9-9). Finally, it was increased to 14.7×10^3 cells/ μ l (2021-9-28). There was no change in the amount of C-reactive protein (CRP) (15 mg/dl). CSF test showed that glucose and protein were 15 and 240 g/dL, respectively. Results of direct observation with slide, India ink stain and blood culture confirmed *Cryptococcus*. Finally, Cryptococcal meningitis was diagnosed. Patient stabilized with amphotericin B, fluorocytosine, fluconazole, acyclovir and vancomycin, co-trimoxazole, dexamethasone, pethidine, liposomal amphotericin, depakine, ondansetron, lorazepam and had been discharged from hospital. **Conclusion:** Fungi are one of the most opportunistic infections that can be cause disease severity in individuals with immunodeficiency disease such as HIV, especially in patients with COVID-19. Prompt diagnosis and treatment should be performed immediately in these patients.

Keywords: HIV positive, COVID-19, *Cryptococcus*, Cryptococcal Meningitis



Antibiotic-Resistant rate of Klebsiella spp. Species Isolated from Patients Specimens

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Abstract: Introduction: Nosocomial outbreaks of multidrug-resistant Klebsiella species are caused by extended-spectrum beta-lactamase (ESBL) producer types. The incidence of resistant Klebsiella isolates has been steadily increasing. The resulting limitations in treatment options require new measures to manage multidrug-resistant Klebsiella. While prevalence determination of resistant Klebsiella against different antibiotics is a useful epidemiological tool for infection control, so we decided to investigate the antibiotic-resistant rate of Klebsiella spp. species that were isolated from patients' specimens. Methods: The information on resistant Klebsiella spp. species to antibiotics was gathered from the hospital information system, of Rouhani Hospital, Babol University of Medical Sciences in Babol (2020-2022). Klebsiella spp. species were identified by microbiological methods; also microbial susceptibility testing was performed by disk diffusion method according to clinical and laboratory standards institute (CLSI). SPSS 22 and Chi-square test were used (P-value less than 0.05) for data analysis. Results: Antibiotic resistance was as follows in different years; 2020; Piperacillin/Tazobactam (TZP) for 76 isolates (53.90%, Confidence interval (CI): 42.1-65.3), Cefazidime (CAZ) for 85 isolates (76.5%; CI: 65.80-84.70), ceftriaxone (CRO) for 86 isolates (76.70%; CI: 6.10-84.90), meropenem (MEM) for 82 isolates (52.40%; CI: 41.10-63.40), amikacin (AMK) for 84 isolates (52.10%; CI: 40.10-62.20), ciprofloxacin (CIP) for 86 isolates (73.30%; CI: 62.50-82.00), sulfamethoxazole and trimethoprim (SXT) for 1 isolate (100%; CI: 5.50-100). 2021; TZP for 19 isolates (78.90%, CI: 53.90-93.00), CAZ for 34 isolates (88.20%; CI: 71.60-96.10), CRO for 38 isolates (92.10%; CI: 77.50-97.90), MEM for 43 isolates (72.10%; CI: 56.10-84.20), AMK for 44 isolates (50.00%; CI: 34.80-65.20), CIP for 44 isolates (81.80%; CI: 66.70-91.30), SXT for 19 isolates (78.90%; CI: 53.90-93.00) and nitrofurantoin (NIT) for 5 isolates (40.00%; CI: 7.30-83.00). 2022; TZP for 3 isolates (100%, CI: 31.10-100), CAZ for 62 isolates (79%; CI: 66.40-87.90), CRO for 81 isolates (76.80%; CI: 66.90-86.00), MEM for 39 isolates (64.10%; CI: 47.20-78.30), AMK for 69 isolates (56.50%; CI: 41.40-65.00), CIP for 66 isolates (80.30%; CI: 68.30-88.70), SXT for 79 isolates (75.90%; CI: 64.70-84.50), NIT for 28 isolates (53.60%; CI: 34.20-72.00). Conclusion: Antibiotic-resistant rate of Klebsiella spp was observed. Antibiotic-resistant rates are increasing over years. Keywords: Antibiotic Resistant, Klebsiella spp., Specimens



Measurement of Vitamin D in Patients Admitted to Intensive care unit during the Outbreak of Coronavirus

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Abstract: Introduction: Vitamin D is a group of vitamins, which increase the absorption of calcium, phosphate, and magnesium in the intestine, and help the growth and strength of bones. In diseases related to respiratory viruses, vitamin D has a role in preventing disease as well as limiting disease severity. Also, immune response activity is dependent on adequate levels of vitamin D, considering the outbreak of coronavirus and the need for patients to have a strong immune system, this research was conducted to measure the vitamin D level in patients suspected of suffering from the coronavirus infection hospitalized in the intensive care unit (ICU) ward. Methods: In this descriptive study, 78 patients that were admitted to the ICU and suspected of coronavirus infection were considered. Patients' Information was extracted from hospital information systems (HIS) (Rouhani Hospital, Babol University of Medical Sciences, Iran, 2020). Vitamin D levels were measured by kit. Descriptive statistics, frequency table, and T-test were used to check the relationship between variables (P-value less than 0.05). Results: Results showed that 27 (34.61%) and 51 (65.38%) patients were women and men, respectively. Vitamin D levels were measured as follows; severe deficiency (20 ng/ml) in 34 (43.58%) patients, deficiency (20-29 ng/ml) in 27 (34.61%) patients, sufficient (30-100 ng/ml) 17 (21.79%) patients. There was no significant difference between the normal level of Vitamin D and genus (P-value higher than 0.05). Conclusion: Results showed that the patient's prevalence with severe deficiency and deficiency level of Vitamin D was more than the patient with a sufficient level of Vitamin D. So a treatment using Vitamin D is necessary for patients suffering from coronavirus infection, especially patients who are admitted in ICU. Keywords: Vitamin D, Patients, Intensive care unit, Coronavirus



Antibiotic Resistant Rate of *Pseudomonas* spp. Species Isolated from Patients Samples

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Background and Aim: *Pseudomonas* spp. is an opportunistic nosocomial pathogen, especially in immunocompromised hosts, which has become one of the most prominent gram-negative bacteria causing nosocomial infections. This bacterium is resistant to many antibiotics. The aim of this study was to determine the antibiotic resistance of *Pseudomonas* spp. strains isolated from patient samples.

Methods: The information of 53 *Pseudomonas* spp. isolates was gathered from microbiology laboratory of Rouhani Hospital, Babol University of Medical Sciences in Babol in The first six months of 2021. Bacteria were identified by laboratory microbiological methods; also microbial susceptibility testing was performed by disk diffusion method. For data analysis, SPSS 22 and Chi-square test were used (P-value less than 0.05).

Results: Antibiotic resistance was as follows; Piperacillin/Tazobactam for 49 isolates (resistant: 46.90%, sensitive: 49.00%; Confidence interval (CI): 32.70-61.50), Ceftazidime for 17 isolates (resistant: 35.3%, sensitive: 64.7%; CI: 15.30-64.40), ceftriaxone for 35 isolates (resistant: 85.7%, sensitive: 11.40%; CI: 64.90-94.60), meropenem for 53 isolates (resistant: 75.50%, sensitive: 22.60%; CI: 61.50-85.80), amikacin for 53 isolates (resistance: 35.80%, sensitive: 60.40%; CI: 23.40-50.20), ciprofloxacin for 53 isolates (resistance: 47.20%, sensitive: 49.10%; CI: 33.50-61.30), colistin for 32 isolate (resistant: 3.10%, sensitive: 96.90%; CI: 0.20-18.00).

Conclusion: The results of this study showed high antibiotic resistant rate of *Pseudomonas* spp. isolated from different specimen. Prescribing appropriate antibiotics in the correct choice of treatment and reduction antibiotic resistance is effective.

Keywords: Antibiotic-Resistant; *Pseudomonas* spp; Patients



Prevalence Survey of *Strongyloides stercoralis* in Fecal Samples of Patients

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Background and Aim: *Strongyloides stercoralis* is a globally distributed human intestinal nematode. To prevent and treat these diseases, information on the distribution and frequency of these parasites in different geographical areas is needed. Considering the importance of parasitic diseases, especially strongyloidiasis in the Northern provinces, the present study was conducted to determine the prevalence of *Strongyloides stercoralis* in the spiritual hospital of Mazandaran province in Babol city.

Methods: From April to March 2017, stool samples were collected from people referring to Rouhani Hospital. Microscopic detection was performed immediately using the wet expansion method, followed by a formal-ether concentration process for *Strongyloides stercoralis* detection. Analysis of variance (ANOVA), paired samples t-test and Chi-square were used for statistical analysis of data WITH SPSS 21 (P-value less than 0.05).

Results: The prevalence of parasitic infection in urban and rural patients was 725 (44.18%) and 916 (55.81%), respectively. The prevalence of *Strongyloides stercoralis* was observed in 39 patients, of which 20 were women and 19 men. There were also 17 infected patients from the city, and 22 patients from the rural areas. There was a significant relationship between the patient's location and the prevalence of the parasite. People in rural areas were more infected (P-value less than 0.05).

Conclusion: This study showed that *Strongyloides stercoralis* have a high prevalence in patients in rural region. Given the potential risks of these infections, it is recommended that regular screening be performed to diagnose and treat parasitic diseases in this population.

Keywords: *Strongyloides stercoralis*; fecal; patients