Frequency of medical malpractice in deceased patients' records in Tohid Hospital in Sanandaj in 2017

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ABSTRACT

Background and Aim: The number of lawsuits against physicians, healthcare personnel and medical institutions has steadily increased in the world in recent years. Evaluation of medical malpractice in the hospital mortality committees is one of the ways to investigate medical errors, which, despite lack of complaints against physicians, can lead to detection of malpractices in death cases in the hospitals. The aim of this study was to determine the frequency of medical malpractice cases in the records of dead patients in Tohid Hospital in Sanandaj, Iran in 2017.

Material and Methods: This is a retrospective descriptive cross-sectional study. In this study, after obtaining the Ethics Committee approval of the Kurdistan University of medical sciences, we reviewed the records of all of the patients died at Tohid Hospital in Sanandaj in 2017. Among these cases, referral cases to the Mortality Committee and the outcome of the evaluation of the experts of the committee was evaluated, and eventually, we extracted the necessary information from cases confirmed by the hospital mortality_committee, as medical malpractice cases. Data were introduced into SPSS 22 software. We used descriptive statistics (mean, standard deviation, percentage) and chi-square test for data analysis.

Results: Among 732 deaths in Tohid Hospital, 52.6% were male 70.2%, illiterate, 73.7% urban residents and 32.9% housewives. The mean age of the deceased patients was 69.8 years. The most common cause of death was related to cancers (22.7%). 25 cases (3.5%) were suspected of medical errors in the preliminary evaluation and malpractice was confirmed in 2.3% of all deaths. 68% of the cases were referred to the mortality committee. The most frequent cause of malpractice was related to indifference (58%).

Conclusion: The findings of this study showed that the most cases of medical failure were due to medical indifference manifested by medical personnel. Improvement of the abilities of physicians and medical staff in various stages of treatment during their education and by planning effective workshops after graduation, and also paying more attention to religious standards and ethics can lead to a significant reduction in the frequency of deaths due to medical malpractice in medical centers.

Keywords: Medical malpractice, Mortality Committee, Hospital, Indifference

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Association of olfactory dysfunction with hospitalization for COVID-19: a multicenter study in Kurdistan

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H.Z. conceived, designed, conducted, and supervised the study, and wrote and revised the manuscript.
E.S. wrote and revised the manuscript, and interpreted the data.
M.A.R. conducted the study and revised the manuscript.
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G.M. conducted the study and revised the manuscript.
B.Z. conducted the study and revised the manuscript.
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REVIEW

WILEY

Complement inhibition: A possible therapeutic approach in the fight against Covid-19

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Abstract

The complement system, as a vital part of innate immunity, has an important role in the clearance of pathogens; however, unregulated activation of this system probably has a key role in the pathogenesis of acute lung injury, which is induced by highly pathogenic viruses (i.e. influenza A viruses and severe acute respiratory syndrome [SARS] coronavirus). The novel coronavirus SARS-CoV-2, which is the causal agent for the ongoing global pandemic of the coronavirus disease 2019 (Covid-19), has recently been spread to almost all countries around the world. Although most people are immunocompetent to SARS-CoV-2, a small group develops hyper-inflammation that leads to complications like acute respiratory distress syndrome, disseminated intravascular coagulation, and multi-organ failure. Emerging evidence demonstrates that the complement system exerts a crucial role in this inflammatory reaction. Additionally, patients with the severe form of Covid-19 show over-activation of the complement in their skin, sera, and lungs. This study aims to summarise current knowledge concerning the interaction of SARS-CoV-2 with the complement system and to critically appraise complement inhibition as a potential new approach for Covid-19 treatment.

KEYWORDS
C5, complement system, Covid-19, membrane attack complex, SARS-CoV-2

1 | INTRODUCTION

The emergence of the coronavirus disease 2019 (Covid-19) pandemic, caused by a newly discovered coronavirus called the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), has necessitated a fast and thorough understanding of its pathophysiology.[1,2] Presently, Covid-19 management is limited to palliative and symptomatic treatment. Measures should be taken to develop more effective therapies.[3]

The complement system—which consists of more than 30 types of soluble plasma proteins or membrane proteins—is sensitive to cellular damage and pathogens.[4,5] It can play important roles, for instance, in protecting the host against pathogens or clearing the

Abbreviations: ACE2, Angiotensin-converting enzyme-2; ADCC, Antibody-dependent cellular cytotoxicity; ADCD, Antibody-dependent complement deposition; ADCP, Antibody-dependent cell-mediated phagocytosis; ADE, Antibody-dependent enhancement; ALI, Acute lung injury; ARDS, Acute respiratory distress syndrome; C1INH, C1 esterase inhibitor; Covid-19, Coronavirus disease 2019; CTLs, Cytotoxic T lymphocytes; CXCL8, C-X-C motif ligand 8; DC, Dendritic cell; DPP4, Dipeptidyl peptidase 4; GM-CSF, Granulocyte-macrophage colony-stimulating factor; ICU, Intensive care unit; IFN, Interferon; IgG, Immunoglobulin G; IL-6, Interleukin-6; MAC, Membrane attack complex; MASP, MBL-associated serine protease; MBL, Mannose-binding lectin; MERS-CoV, Middle East respiratory syndrome coronavirus; MOF, Multi-organ failure; NET, Neutrophil extracellular trap; NLR, Neutrophil-to-lymphocyte ratio; ORF, Open reading frame; PD-1, Programed cell death protein 1; PRRs, Pattern recognition receptors; RBD, Receptor-binding domain; RdRp, RNA-dependent RNA polymerase; SARS-CoV-2, Severe acute respiratory syndrome coronavirus-2; sC5b-9, Soluble C5b-9; TF, Tissue factor; TGF-β, Transforming growth factor-β; TMPRSS2, Ttransmembrane serine protease 2; TNF-α, Tumour necrosis factor-α; vWF, von-Willebrand factor.

Research in Molecular Medicine

Decreased Gene Expression of Lipoxin A4 Receptor May Contribute to Nonallergic Rhinitis Pathogenesis

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ABSTRACT

Background: Rhinitis is a prevalent chronic inflammatory illness of the nasal mucosa. Arachidonic acid-derived lipoxin A4 (LXA4) has long been recognized to exert crucial anti-inflammatory and pro-resolving effects on inflammatory responses through a specific receptor named LXA4 receptor/formyl peptide receptor-2 (ALX/FPR2). This study aimed to determine the serum level of LXA4 and the relative mRNA expression level of *FPR2* in peripheral blood cells of patients with rhinitis (allergic and nonallergic) compared to healthy individuals.

Materials and Methods: The study groups consisted of 37 patients with Allergic Rhinitis (AR), 16 patients with Nonallergic Rhinitis (NAR), and 20 sex- and age-matched healthy individuals. The measurement of LXA4 serum level was performed by the Enzyme-Linked Immunosorbent Assay (ELISA) technique, and the analysis of *FPR2* mRNA expression level was performed by quantitative real-time PCR method.

Results: The serum concentrations of LXA4 decreased in AR and NAR patients compared to healthy controls; however, this difference was not statistically significant ($P>0.05$). Besides, the mRNA expression level of *FPR2* in peripheral blood cells of patients with nonallergic rhinitis was significantly lower than that in allergic rhinitis ($P<0.05$).

Conclusion: Our results suggest that reduced gene expression of *FPR2* may contribute to developing persistent and chronic nasal mucosa inflammation seen in NAR patients. Therefore, stable analogs of LXA4 and its receptor agonist may help develop new therapeutic approaches for rhinitis.

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Research in Molecular Medicine

Difference in the Cytomegalovirus-related Clinical Laboratory Findings Between Patients With Bone Marrow and Kidney Transplantations

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Cytomegalovirus, Bone marrow transplantation, Kidney transplantation, Viral load, Cyclosporine

ABSTRACT

Background: Despite close monitoring of transplant patients, Cytomegalovirus (CMV) infection has remained one of the most critical problems in transplantation. This study investigates the relationship between CMV viral load and clinical laboratory findings in transplant recipients.

Materials and Methods: A total of 34 transplant recipients comprising 15 Kidney Transplant (KT) recipients and 19 Bone Marrow Transplant (BMT) recipients admitted to the Imam Reza Hospital in Kermanshah Province, Iran, were enrolled in this study. The CMV viral load was quantified by the real-time PCR technique.

Results: The CMV viral load in KT recipients was significantly higher than in BMT recipients (P=0.03), and there was a positive association between the level of virus and the level of cyclosporine in the blood of patients (r=0.51, P=0.02). Besides, CMV viral load was positively correlated with WBC (r=0.32, P=0.04), urea (r=0.47, P=0.002), creatinine (r=0.39, P=0.01), aspartate aminotransferase (r=0.33, P=0.04), and lactate dehydrogenase (r=0.4, P=0.01). Also, it was negatively associated with albumin (r=-0.61, P<0.001), sodium (r=-0.4, P=0.01), and calcium levels (r=-0.46, P=0.003). There were also significant differences between KT and BMT recipients regarding the CMV-related clinical laboratory findings of urea (P=0.02), creatinine (P=0.001), uric acid (P=0.005), direct bilirubin (P=0.04), albumin (P=0.04), platelet (P<0.001), and sodium (P=0.04) levels.

Conclusion: Based on present data, we conclude that despite careful monitoring of patients, infection with CMV is still one of the most important problems associated with organ transplantation, which is directly related to many laboratory findings.

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Cyclins and cyclin-dependent kinases: from biology to tumorigenesis and therapeutic opportunities

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Abstract

The discussion on cell proliferation cannot be continued without taking a look at the cell cycle regulatory machinery. Cyclin-dependent kinases (CDKs), cyclins, and CDK inhibitors (CKIs) are valuable members of this system and their equilibrium guarantees the proper progression of the cell cycle. As expected, any dysregulation in the expression or function of these components can provide a platform for excessive cell proliferation leading to tumorigenesis. The high frequency of CDK abnormalities in human cancers, together with their druggable structure has raised the possibility that perhaps designing a series of inhibitors targeting CDKs might be advantageous for restricting the survival of tumor cells; however, their application has faced a serious concern, since these groups of serine–threonine kinases possess non-canonical functions as well. In the present review, we aimed to take a look at the biology of CDKs and then magnify their contribution to tumorigenesis. Then, by arguing the bright and dark aspects of CDK inhibition in the treatment of human cancers, we intend to reach a consensus on the application of these inhibitors in clinical settings.

Comparison of the analgesic effect of Ketamine and Midazolam with Apotel and Ketorolac in renal colic patients: a clinical trial

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