IMPORTANCE OF C REACTIVE PROTEIN IN THE DIAGNOSIS OF COVID 19

[1]Makhamatov Umidjon Shoirjonovich, [2]Khabibullayeva Moxichehra Abdulkhamidovna
teacher of the Department of Nutrition, Children and Adolescent Hygiene, Fergana Public Health Medical Institute[1], laboratory assistant, Fergana branch of the Republican Scientific Center for Emergency Care[2]

ANNOTATION

The role of reactive protein C in the diagnosis of Covin 19 was studied by a team of volunteers from the Royal Free Hospital in London who were studying the properties of coronavirus with the First Volunteer Group. The study participants were infected with the coronavirus in a safe and constantly monitored environment. Participants will be monitored by physicians and specialists and will receive other information.

Keywords:Covid 19, C-reactive protein, synthesized, by the liver, released, in response to factors, macrophages, and fat cells, (adipocytes), a member of this family, pentraxin, proteins, family. C-peptide (insulin), or, protein, C (blood coagulation)., C-reactive, protein first, T cells.

INTRODUCTION

C-reactive protein (CRP) is an annular (ring-shaped), pentameric protein found in blood plasma, its circulating concentration rises in response to inflammation. This acute phase protein is secreted by the liver of interleukin-6 macrophages and T cells. Its physiological role is to bind lysophosphatidylcholine through a complement system expressed on the surface of dead or dying cells (and some bacterial species) for activation.

C-reactive protein is synthesized by macrophages and fat cells (adipocytes) in response to factors released by the liver. It is a member of the pentraxin family of proteins. [6] It is not related to C-peptide (insulin) or protein C (blood coagulation). C-reactive protein was the first to detect pattern-detecting receptors (PRR).

In healthy adults, the normal concentration of C-reactive protein varies between 0.8 mg / L and 3.0 mg / L. However, some healthy adults increase C-reactive protein to 10 mg / L. C-reactive protein concentrations increase with age, possibly due to subclinical conditions. There are also no seasonal variations in CRP concentration. The interleukin-1 family of gene polymorphisms, polymorphic GT replication of the interleukin 6 and CRP gene, affects normal CRP concentrations in the absence of any medical disease in humans. [6] The half-life of CRP in plasma is 19 hours and is constant in all medical conditions.

RESEARCH RESULTS

In the United Kingdom, in March 2021, volunteers began medical research under the Human Challenge Program, a program to study the effects of the SARS-CoV-2 coronavirus on the body. The government is doing this research

[1] .GRCh38: Ensembl relizi 89: ENSG00000132693 - Ansambl, 2017 yil may

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told volunteers that SARS-CoV-2 was the first study in the world to deliberately infect the coronavirus. Its goal is to improve and develop vaccines against COVID-19 and treatments for the disease.

The first group of volunteers was treated by specialists from the Royal Free Hospital in London, who were studying the properties of the coronavirus. The study participants were infected with the coronavirus in a safe and constantly monitored environment. Participants were monitored continuously by physicians and specialists. The study looked at how the human immune system responds to the Sars-CoV-2 virus and how an infected patient spreads its particles around. A similar study was conducted among healthy volunteers in the development of influenza and malaria vaccines. However, the difference from this study is that participants in these trials were initially vaccinated with the appropriate vaccine.

When stimulation is present, CRP levels can increase 10,000-fold from 50 mg / L to 500 mg / L. Its concentration can rise to 5 mg / L in 6 hours and reach 48 hours. Therefore, the only factor influencing the concentration of CRP in the blood is its level of production, which is exacerbated by inflammation, infection, trauma, necrosis, malignancy, and allergic reactions. Other inflammatory mediators that may increase CRP include TGF beta-1 and tumor necrosis factor alpha. In acute inflammation, CRP may increase from 50 to 100 mg / L in 4–6 hours in mild to moderate inflammation or in insults such as skin infection, cystitis, or bronchitis. It doubles every 8 hours and 36-50 hours after injury or inflammation

[1] *"Sichqoncha PubMed ma'lumotnomasi:"*. *Milliy Biotexnologiya Axborot Markazi, AQSh Milliy Tibbiyot Kutubxonasi.*

reaches the highest level within. CRP of 100 to 500 mg / L is a high predictor of inflammation due to bacterial infection. Once the inflammation subsides, the CRP level decreases rapidly as its contraction period is relatively short.

COVID-19 coronavirus infection is usually transmitted from person to person through coughing and sneezing. After infection, the disease lasts an average of 5 days before symptoms begin. This period can last from 2 to 14 days. The standard method of diagnosis is to examine fluid from the nasal cavity or throat using a reverse transcription polymerase chain reaction (rRT-PCR). The patient can also be diagnosed using a computed tomography scan to identify symptoms, risk factors, and signs of pneumonia.

The World Health Organization (WHO) says the SARS-CoV-2 coronavirus was contracted from a bat when transmitted to humans by another animal. The researchers listed four possible hypotheses about the occurrence of coronavirus. Among them is the fact that the coronavirus was transmitted from bats to humans by another animal. While the direct transmission of the virus from bats to humans has been relatively underestimated, food and laboratory transmission have been reported as far-reaching.

The closest relative of the virus that causes COVID-19 has been found in bats. However, the report states that the evolutionary distance between the viruses detected in the bats and SARS-CoV-2 is several decades, indicating that the virus did not spread from them.

The role of inflammation in cancer is not well understood.

[1] .*Tompson D, Pepis MB, Wood SP (1999 yil fevral). "Odamning C-reaktiv oqsilining fiziologik tuzilishi va uning fosfokolin bilan kompleksi". Tuzilishi.* ***7*** *(2): 169–77. doi:10.1016 / S0969-2126 (99) 80023-9. PMID 10368284.*

The risk of cancer is higher when certain parts of the body become chronically inflamed. Although there is a link between C-reactive protein levels and the risk of developing cancer, there is no link between genetic polymorphisms affecting CRP turnover levels and cancer risk. []

A prospective cohort study in 2004 on the risk of colon cancer associated with CRP levels found that people with colorectal cancer were more likely to have colorectal cancer than those without colorectal cancer. Had a concentration of CRP. [46] It should be noted that the average CRP level in both groups was at the CRP level that is typically found in healthy people. However, these findings suggest that low levels of inflammation may be associated with a risk of colon cancer, which, in addition to previous studies, has shown that anti-inflammatory drugs reduce the risk of colon cancer. can reduce.

In summary, CRP is mainly used as a sign of inflammation. In addition to liver failure, there are few known factors that interfere with CRP production. [6] Interferon alpha inhibits the formation of CRP from liver cells, which may explain the low levels of CRP found during viral infections compared to bacterial infections [19]

[1] 6.*Pepis MB, Xirshfild GM (iyun 2003). "C-reaktiv oqsil: muhim yangilanish". Klinik tadqiqotlar jurnali.* ***111*** *(12): 1805–12. doi:10.1172 / JCI18921. PMC 161431. PMID 12813013.*

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Measuring and tabulating CRP values may be useful in determining disease progression or treatment effectiveness. ELISA, immunoturbidimetry, nephelometry, radial immunodiffusion [20]

- low: hs-CRP level up to 1.0 mg / L
- average: 1.0 to 3.0 mg / l
- high: above 3.0 mg / L

Aging increases with normal levels. [21] Later higher levels are found in pregnant women, mild inflammatory and viral infections (10-40 mg / L), active inflammation, bacterial infection (40-200 mg / L), severe bacterial infections and burns (> 200 mg) / L). [22]

The threshold level of CRP, which indicates bacterial from non-bacterial disease, can vary depending on the disease and the stage of manifestation of the disease, such as malaria, HIV, and malnutrition. [23]

CRP is a more sensitive and accurate reflection of an acute phase reaction than ESR [24] (erythrocyte sedimentation rate). ESR may be normal when CRP is elevated. CRP returns to normal faster than ESR in response to therapy.

LITERATURE

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