



Prevention of erectile dysfunction in men with COVID-19

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ABSTRACT

Experience gained in the fight against COVID-19 has highlighted that indicators of a predisposition to a more severe course of the disease include not only advanced age, obesity, hypertension, and diabetes mellitus, but also male gender. Notably, one of the consequences of coronavirus infection is endothelial dysfunction. In this condition, the lining of small blood vessels is compromised, leading to insufficient blood supply to the tissues they serve, resulting in functional loss. Studies indicate that this vascular dysfunction may contribute to the development of impotence in men who have recovered from COVID-19.

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COVID-19 bilan kasallangan erkaklarda erektil disfunktsiyani profilaktikasi

ANOTATSIYA

Kalit so'zlar:

koronavirus infeksiyasi,
erektil disfunktsiya,
testosteron,
libido,
ereksiya,
prostate bezi.

COVID-19 ga qarshi kurashishda to'plangan tajribalardan ma'lum bo'ldiki, kasallikning og'ir kechishiga moyilligini ko'rsatuvchi belgilarga keksalik, semirish, gipertoniya va qandli diabet, shuningdek erkak jinsini ham kiritish lozim. Qayd etilishicha, koronavirus infeksiyasining oqibatlaridan biri bu endotelial disfunktsiyadir. Bunday holatda mayda qon tomirlarning shilliq qavati buziladi va ular oziqlanadigan to'qimalar normal qon bilan ta'minlanmaydi va o'z funksiyalarini yo'qotadi. Tadqiqotga ko'ra, qon tomirlarning bu disfunktsiyasi COVID-19 dan tuzalgan erkaklarda jinsiy zaiflikning rivojlanishiga olib kelishi mumkin.

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Профилактика эректильной дисфункции у мужчин с COVID-19

АННОТАЦИЯ

Ключевые слова:

коронавирусная инфекция, эректильная дисфункция, тестостерон, либидо, эрекция, предстательная железа.

С накоплением опыта в борьбе с COVID-19 стало очевидно, что к факторам, предрасполагающим к более тяжелому течению заболевания, следует относить не только пожилой возраст, ожирение, артериальную гипертензию и сахарный диабет, но и мужской пол. Отмечается, что одним из последствий коронавирусной инфекции является эндотелиальная дисфункция – нарушение слизистой оболочки мелких кровеносных сосудов, из-за чего ткани, питаемые этими сосудами, теряют нормальное кровоснабжение и свои функции. Согласно исследованию, такая сосудистая дисфункция может способствовать развитию импотенции у мужчин, перенесших COVID-19.

In the modern era, COVID-19 is the biggest challenge facing healthcare professionals and scientists worldwide. High contagiousness and severe course of the disease have become a serious test for the global healthcare system. All over the world, measures were taken to limit the spread of the disease, up to the re-proliferation of multidisciplinary and specialized clinics to increase the ability to provide emergency care to patients with coronavirus infection, suspend elective surgeries, inpatient and outpatient care for seriously ill patients, including urological profile [1, 2, 3, 4]. Significant efforts and funds have been devoted to the treatment of COVID-19, while the interaction of the virus with various organs and systems of the human body has been poorly studied so far [10,11, 12, 13].

As experience gained in the fight against COVID-19, it became clear that the signs indicating a predisposition to a more severe course of the disease should include not only old age, obesity, arterial hypertension, and diabetes mellitus, but also male sex [6, 7, 8, 9]. It is noted that one of the consequences of coronavirus infection is endothelial dysfunction. In this condition, the mucous membrane of small blood vessels is disturbed, and the tissues they feed cease to be supplied with blood normally and lose their functions. According to the study, this dysfunction of the blood vessels can lead to the development of impotence in men who have recovered from COVID-19.

The purpose of the study is to study the effect of coronavirus infection on erectile function.

MATERIAL AND RESEARCH METHODS

From 2021 to 2022, 46 men who had COVID-19 pneumonia and complained of a pronounced decrease in libido, erectile function, and the quality of sexual intercourse after the illness were consulted in the urology department of the clinic of the Andijan State Medical Institute. The duration of the disease ranged from 3 to 6 months. The age of the patients ranged from 38 to 57 years. All of them had at least one PCR-positive respiratory swab for COVID-19. Anamnestically, all patients, based on computed tomography (CT) of the chest, were diagnosed with pneumonia of varying severity.

Patients with a mild course of COVID-19, complicated by CT-1 pneumonia, were treated on an outpatient basis, under the supervision of a local therapist. Patients with moderate and severe courses (pneumonia CT-2 and CT-3) were hospitalized in specialized COVID hospitals, where they underwent the main stages of therapy. At the same time, 75% of them were on the support of humidified O₂, and 11% of patients were treated in COVID intensive care using non-invasive artificial lung ventilation in the CPAP mode (continuous positive airway pressure mode – Continuous Positive airway pressure).

The diagnostic complex included a physical examination, general blood and urine tests, a biochemical blood test, an ultrasound examination of the prostate and scrotum organs, a study of the level of a common prostate -specific antigen, a study of hormonal status – the total level of testosterone (T), luteinizing hormone (LH), prolactin was determined (P).

Patients were surveyed using the following questionnaires: IIEF (The International Index of erectile function, International Index of Erectile Function, IIEF-5);

Over the past 6 months:					
1. How do you rate your confidence that you could get and keep an erection?	Very low 1	Low 2	Moderate 3	High 4	Very high 5
2. When you had erections with sexual stimulation, how often were your erections hard enough for penetration?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
4. During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?	Extremely difficult 1	Very difficult 2	Difficult 3	Slightly difficult 4	Not difficult 5
5. When you attempted sexual intercourse, how often was it satisfactory for you?	Almost never/never 1	A few times (much less than half the time) 2	Sometimes (about half the time) 3	Most times (much more than half the time) 4	Almost always/always 5
IIEF-5 scoring: The IIEF-5 score is the sum of the ordinal responses to the 5 items. 22-25: No erectile dysfunction 17-21: Mild erectile dysfunction 12-16: Mild to moderate erectile dysfunction 8-11: Moderate erectile dysfunction 5-7: Severe erectile dysfunction					

IPSS (International Prostate Symptom Score, International Prostate Symptom Index, a scale for the overall assessment of prostate diseases); AMS (Aging Males Symptoms, Male Aging Symptoms Questionnaire).

The results of the study showed that during the physical examination, no significant pathology was detected in the applied men. General clinical blood and urine tests, the results of a biochemical blood test were within normal limits.

Ultrasound examination (ultrasound) showed that the volume of the pancreas was less than 45 cm³, and the volume of residual urine was 0-50 ml.

All those who applied noted a decrease in sexual desire of varying severity, from sluggish periodic desires to their complete absence within 1 to 3 months after suffering COVID-19 pneumonia.

Many of them forced themselves to have intercourse by force of will, in most cases (67%) under the psychological pressure of their sexual partners. This eventually led to conflicts, which further aggravated the emotional situation.

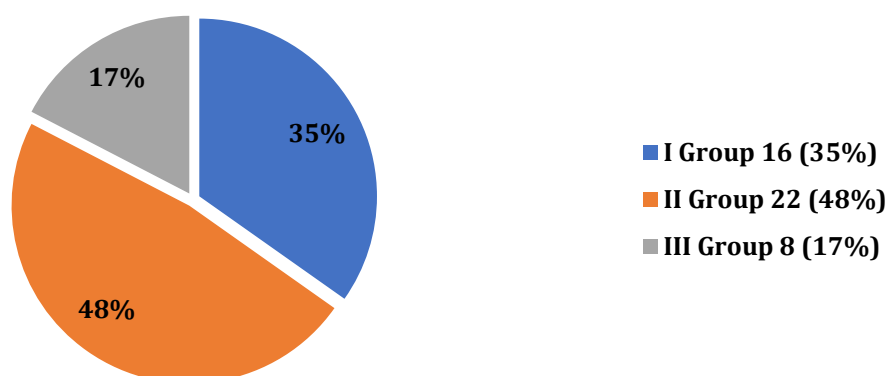
According to the results of the survey of the International Index of Erectile Function, patients were divided into 3 groups:

Group 1 – 16 men, whose total score on the IIEF-5 scale was 17-21, were included in the group with a mild degree of erectile dysfunction;

Group 2 – in 22 patients, the total score was 12-16, which combined them into a group with a moderately mild degree of erectile dysfunction

Group 3 – 8 patients with severe erectile dysfunction, as the sum of the test was 5-7 points.

The results of the survey of patients according to the IIEF-5 scale



After undergoing COVID -19, patients of groups 1 and 2 noted that they were most concerned about difficulties with the onset and maintenance of an erection, incomplete satisfaction from sexual intercourse, and group 1 patients noted on a 3–4-point system (sometimes or in half of the cases), and patients of the 2nd group – according to a 2-point system (which means rarely).

The consequences of COVID-19 in patients of group 3 were expressed in the absence of morning erection, complete dissatisfaction with sexual intercourse, and lack of libido. Values relative to the generally accepted testosterone value of more than 12 nmol / l correspond to the norm, according to the recommendations of ISSAM (International Society for the Study of Aging and Men's Health). In our study, the laboratory testosterone level in these groups was: in patients of group 1 -12.0 nmol / l and above, in group 2 – testosterone levels were reduced to 10.0 nmol / l, in group 3 – testosterone levels were reduced to 8.0 nmol / l.

FINDINGS:

1. The topic of viral lesions of the organs of the male reproductive system with negative consequences for erectile fertility components for urological practice is also expanding due to the consequences of the coronavirus infection.
2. COVID infection hurts erectile function by reducing testosterone levels.

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