MODERN MEDICINE AND PRACTICE
https://inovatus.es/index.php/ejmmp
EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE
Vol. 3 No. 11 (Nov - 2023) EJMMP ISSN: 2795-921X

AN ACEPTIC NECROSIS OF THE FEMORAL HEAD AFTER COVID-19

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Annotation: The recent outbreak of coronavirus disease 2019 (COVID-19) has become a global outbreak epidemic _ Corticosteroids wide are used at treatment heavy acute respiratory syndrome (SARS), and pathological findings observed in severe acute respiratory syndrome caused by coronavirus 2 (SARS-CoV-2) are very similar to those seen in severe acute respiratory infections syndrome _ coronavirus (SARS- CoV) infection. However, long-term use of corticosteroids (especially at high doses) is associated with potentially serious side effects, especially avascular necrosis of the femoral head caused by steroids. Hormones - This stick O two the ends of this one review called up provide to healthcare providers in coronavirus disease 2019 (COVID-19) endemic countries and regions information information, especially V respect advantages and cons use corticosteroids V treatment patients With COVID-19.

Key words: corticosteroids, coronavirus, acute respiratory syndrome, avascular necrosis, femoral head.

Introduction. Coronaviruses are important pathogens of humans and animals. In late 2019, a new coronavirus was identified as the cause of a cluster of pneumonia cases in Wuhan, a city in the Chinese province of Hubei . It spread quickly, leading to an epidemic throughout China, followed by an increase in cases in other countries around the world. In February 2020, the World Health Organization (WHO) designated the disease COVID-19, which stands for coronavirus disease 2019 [1,3,5,12,17,]. The virus that causes COVID-19 is referred to as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); it was previously called 2019-nCoV. On January 30, 2020, WHO declared the COVID-19 outbreak a public health emergency of international concern and began characterizing it as a pandemic in March 2020 to highlight the seriousness of the situation and urge all countries to take action to detect infection and prevent spread. [2,7,11,15,26,33].

Secondary AN is more common than idiopathic AN. The cause of secondary ANFH may be the use of glucocorticoids, alcohol intoxication, radiation or chemotherapy, various coagulopathies (DIC syndrome, thrombophilia), and immunoinflammatory rheumatic diseases, sickle cell anemia, HIV, hyperlipidemia, liver disease and liver failure, diving g and other hyperbaric conditions, pregnancy and injuries, especially with a violation of the integrity of blood vessels (fracture of the femoral neck, traumatic dislocation of the hip) [4,8,11,14,22,26,30,32]. Since with COVID-19 in the clinic, several etiological reasons were encountered in patients at once. [6,9,10,13,16]. In patients with acute respiratory syndrome caused by coronavirus infection, various post-COVID complications occur, and one of them is aseptic necrosis of the femoral head, which requires a more extensive treatment method.

Objective: To identify the incidence of aseptic necrosis of the femoral head after treatment of acute respiratory syndrome caused by coronavirus infection.

Materials and methods: During a retrospective and randomized study at the Bukhara Regional

Multidisciplinary Medical Center, 201 patients with severe form of ARVI found that the corresponding application glucocorticoids at patients With severe shape ARVI can significantly reduce mortality and reduce duration stay V hospital.

Study results: The study examined 201 patients who became ill with severe acute respiratory syndrome and received corticosteroids. Of the patients, 158 (%) received 500 mg of methylprednisolone daily for 3-5 days followed by using dexamethasone for 3-4 weeks, 28 (%) received prednisolone 60-80 mg/day for 7-10 days followed by using dexamethasone for 3-4 weeks, and the remaining 15 (%) received 18-24 mg dexamethasone for 7-10 days.

glucocorticoid pulse therapy has a rapid anti-inflammatory effect, it also increases the neutrophil/lymphocyte ratio and D- dimer levels, increasing the risk of thromboembolism. In newly diagnosed patients with diabetes, frequent use of glucocorticoids may worsen hyperglycemia. We found that the rate of bacterial infection (25%/13.1%, P=0.041) and the rate of fungal infection (12.7%/0.7%, P<0.001) during hospitalization were significantly higher in the steroid group than in the steroid group. nonsteroidal treatment group . There have also been reports of glucocorticoid- induced bacterial endocarditis, strongyloides, or amoebic infections that may progress to catastrophic complications in patients with COVID-19 pneumonia.

In a subsequent study, 23.1% (46 of 201) of patients with SARS developed steroid-induced avascular necrosis of the femoral head, which was mainly associated with the administration of high doses of glucocorticoids during treatment of SARS. However, most studies have ignored the influence of other confounding factors when retrospectively analyzing the relationship between steroids and osteonecrosis of the femoral head. There are many factors to consider, such as hemoglobinopathies .

Looking at data from a retrospective analysis that the incidence of osteonecrosis was closely related to the duration of treatment in 458 patients, a nonlinear relationship was observed between cumulative dose and osteonecrosis . When the total dose of methylprednisolone was less than 5 g, the risk of osteonecrosis remained relatively low. However, as the total dose increased from 5 g to 10 g, the risk of osteonecrosis increased .

In one study, logistic regression analysis showed that there was a correlation between the maximum daily dose of glucocorticoids and the family nurse practitioner, suggesting that adequate monitoring of the maximum daily dose was necessary . When patients were treated with methylprednisolone 1 mg/kg, 5 mg/kg, 20 mg/kg and 40 mg/kg; the incidence of osteonecrosis was 0%, 42%, 70% and 96%, respectively. In comparison (5 mg/kg/day vs. 1 mg/kg/day), osteonecrosis was found to develop only in the 5 mg/kg/day group. Results showed that prednisone dosage greater than 40 mg/day was positively correlated with osteonecrosis, 73 the incidence increased by 3.6% for every 10 mg dose increase.

For the period from September 2020 to March 2021, on the basis of the clinic of the Bolshoi Medical Center for Traumatology and Orthopedics, 26 operations with the tunnelization method were performed from these 201 post-Covid patients studied . The average age of those operated on was 42 years. 70% of patients had concomitant pathologies : arterial hypertension, diabetes mellitus, fatty hepatosis, peptic ulcer, pancreatitis; 20% of them had previously abused alcohol.

In 85% of cases the disease was bilateral.

In 70% of patients there was a decrease in pain syndrome according to VAS from 5 to 3 points (by 40%). A stable radiological and positive clinical result was noted in 12 (46%) cases, no progression of existing collapse (up to 1 mm) - in 6 (23%) cases, progression of collapse - in 8 (31%) cases, of which endoprosthetics was performed in 4 cases.

Conclusion

Although there is debate about the pros and cons of steroid use, from an orthopedic perspective, the undisputed fact is that long-term, high-dose steroid use leads to ANFH. Therefore, we encourage the judicious use of corticosteroids in the treatment of patients with COVID-19 and do not recommend them as routine treatment. For patients who have been treated with corticosteroids, bisphosphonates, anticoagulants, vasodilators, and traditional Chinese medicine in combination with ESWT, HBOT, and other exercise, treatment options may be considered. We reiterate the importance of regular screening of high-risk patients, especially those on long-term steroid use. MRI is the best tool for early detection of ANFH, and clinicians should make efforts to increase awareness of ANFH prevention. A high index of suspicion is necessary for patients who complain of pain in bones and joints in typical locations. Patients with suspected avascular necrosis should be referred to orthopedic physicians in the early stages, and clinicians should try to delay the progression of osteonecrosis to prevent avascular necrosis from affecting patients' daily lives.

Decompressive surgeries have a number of advantages: they are low-traumatic, are not accompanied by blood loss, do not require high-tech equipment, have a low percentage of complications and do not complicate subsequent arthroplasty. Such surgical interventions have a positive clinical and radiological result and make it possible to delay the time of possible hip arthroplasty .

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