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Case Report

COVID-19 Presented with Paralysis, Confusion and Memory Loss in Rheumatoid Patient: Case Report

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ABSTRACT

78-y-old rheumatoid hypertensive female patient on remission, developed COVID-19 that manifested mainly by transient paralysis and confusion.

Keywords: Rheumatoid arthritis; COVID-19; Paralysis

INTRODUCTION

Coronavirus-19 (COVID-19) caused by severe respiratory distress syndrome caused by Coronavirus 2 which predominantly affects the alveolar structures, has shown top leads to cascade of proinflammatory cytokines similar to those produced and targeted in case of rheumatoid arthritis; namely IL-6, IL1 Beta, TNF alpha. Both diseases lead to profound inflammation and destruction and tissue damage [1]. For this particular reason, the pattern of presentation as well as disease course of COVID-19 in immune compromised rheumatoid patient is different from the usual COVID-19 disease course. Further studies are suggested to define the exact pathway of COVID-19 in rheumatoid patients. This case demonstrates a unique infrequent pattern of Rheumatoid patient infected with COVID-19

Setting: Inpatient.

CASE DESCRIPTION

78-y-old Rheumatoid hypertensive female on Methotrexate, leflunomide x 20 y presented with low grade fever, lethargy, diarrhea x 2 days, family member was COVID positive. Her first COVID-19 swab was negative. Third day, she experienced lower extremities weakness, feet numbness, fever reaching 102 F and apathetic confusion. She fell twice and experienced rib cage pain, Fever became 104 F with loss of consciousness and urinated on herself. Transferred to ER, second COsVID-19 swab was negative and chest x-ray: unilateral basal infiltrate. Admitted as atypical pneumonia, started antibiotics. Her condition deteriorated with more confusion, slurred speech, lower extremities paralysis. Chest CT scan: bilateral basal infiltrates, although no respiratory symptoms. Then, transferred to tertiary center, repeat COVID-19 swab and serum came positive. Clinically: confused, oriented x1, slurred speech, DTJ elicited UE, damped LE, stocking hypoesthesia, MMT UE G5/5, LE muscles around G2/5. Chest; bilateral air entry, basal crackles. Po2 sat 95 RA. Started on Solumedrol, azithromycin x5d, anticoagulants, and blood pressure medications. Gradually improved over 3 weeks, with partial recovery of muscle power reaching G3/5, return of consciousness but with total forgetfulness of the whole event. Transferred to acute rehabilitation continued therapy for 10 days. Discharged home using rollator with muscle strength around 4/5. Continued home therapy for 1.5 months till she returned to her baseline strength using a cane, but continued to experience memory loss more than 6 months.

DISCUSSION

COVID-19 in Rheumatoid patient with preferential CNS affection presented with paralysis, paresthesia and confusion with long term depression.

Favalli et al. reported high risk of rheumatoid patients to COVID-19 infection due to similarity of cytokine cascade generated by both diseases, that lead to higher risk and aberrant presentations of rheumatoid arthritis patients to COVID-19 [2].

Alomari et al. reported that Rheumatoid patients are more vulnerable to SARs-CoV2 being immune-compromised, viral tropism lead to preferential affection of various cells containing ACE2 receptors. In this case, brain glial cells and neurons were mostly affected, with cytokines IL6 and 8 and monocyte chemoattraction protein crossing blood brain barrier leading to brain inflammation. acute transverse myelitis was reported [3].

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This can explain the presentation of this patient being presented mainly by nervous system affection.

Rogers, et al. reported that SARS-COV-2 might cause delusion in a significant proportion of patients in acute stage with possibility of depression and anxiety [4].

CONCLUSION

COVID-19 in rheumatoid arthritis with CNS preferential affection.

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