

Evaluation of Total knee replacement surgery effect on quality of life in patients aged 60 to 70

Abstract

Background: According to studies that examined the biological differences between men and women in the covid-19 disease, it has been found that men infected with the corona virus are three times more likely to be admitted to the intensive care unit than women, and they are more likely to die from this disease. Perhaps one of the aspects that has not been discussed between men and women in contracting Covid-19 is the type and intensity of radiographic involvement between the two gender.

Aim: The aim of this study was to investigate the CT scan of the lungs of patients with covid-19 hospitalized in Imam Khomeini Hospital by gender and its effect on the severity and outcome of the disease.

Materials and methods: This study was a retrospective cross-sectional study. The study population included 276 patients who were diagnosed with covid-19 from April 2020 to September 2020 at the covid-19 Patient Center of Imam Khomeini Hospital in Ardabil. The data collected from the patients' files included age, sex, duration of hospitalization, hospitalization ward, disease severity, final outcome, laboratory variables, comorbidities, Charlton comorbidity index, CTScan involvement patterns, CTScan involvement and intensity score.

Results: A total of 276 patients admitted to the covid-19 wards of Imam Khomeini Hospital in Ardabil were included in the study, and their average age was 63.18 ± 17.46 . 138 (50%) of the participants were male and 138 (50%) were female. The average length of hospitalization was 10.91 ± 9.22 days. The type of inpatient department ($P=0.412$) and the outcome of hospitalization ($P=0.416$) did not have a significant difference in men and women. According to the results, men and women had a significant difference in CBC diff and ferritin values. The percentage of neutrophils was 75.22 ± 11.56 in men and 72.25 ± 12.24 in women ($P=0.045$). Also, the percentage of lymphocytes in men was 18.10 ± 44.63 and in women was 21.55 ± 10.97 ($P=0.021$). The value of serum ferritin was 769.40 ± 743.59 in men and 305.41 ± 356.54 in women ($P=0.00$). History of diabetes in women (39.9) was significantly more than that in men ($P=0.010$). In the current study, the most common CT scan findings were ground glass (63%) and consolidation (61.2%), and the most involved area was the lower lobe of the lungs bilaterally. In men, the total score of both lungs was reported as 24.38 ± 17.79 and in female participants, the total score of both lungs was reported as 24.63 ± 19.40 . Severity scores, stage of involvement and overall lung score in both sexes were significantly different only in the type of involvement of the left middle lobe ($P=0.045$); Thus, in women, more involvement were reported in this lobe (1.80 ± 1.54 versus 1.54 ± 1.14). Only the level of serum ferritin in men had a significant correlation with the involvement of lung CT scan of Covid-19 patients ($r=0.29$ and $P=0.029$).

Conclusion: A significant increase in serum neutrophil and ferritin levels in men with covid-19 indicates more severe inflammation in them, and the correlation of CTScan involvement score with increased serum ferritin levels in men requires more attention and therapeutic measures.

Key words: Covid-19, CT scan, lung involvement score