

Investigating the relationship between the use of aspirin and the outcome of covid 19 disease: a study based on a Persian cohort

Background: Although several studies have been conducted regarding anticoagulants and antiplatelets in the management of covid-19 patients, their effectiveness, necessity and indications are unclear. In the present study, the relationship between aspirin use and the incidence and outcome of the covid-19 disease, which is a study based on a Persian cohort, has been investigated.

Aim: Determining the relationship between aspirin use and covid 19 infection and outcome: a study based on a Persian cohort

Materials and methods: The present study is a nested case control study. The research was conducted on 20,261 people participating in the Persian Cohort Study. These people were divided into two groups once in terms of contracting Covid-19 and another time in terms of death due to Covid-19. The effect of aspirin on infection and death due to corona in these groups was evaluated. The data was collected using the questionnaire of the participants in the Persian cohort study. The criterion for contracting Covid-19 was a positive PCR test. Finally, the study data were analyzed with the help of logistic regression test and spssv26 software and $p < 0.05$ was considered significant.

Results: A total of 20,261 people participated in the Persian cohort study. 9271 (45.8%) were men and 10990 (54.2%) were women. Most people were 45 or younger (20.1%). Most people were illiterate (31.8%). In 6546 (32.3%) people, at least one underlying disease was mentioned, but 13715 (67.7%) had no underlying disease. Most people were overweight (41.4%). Among these people, 7831(38.7%) received aspirin and 12430(61.3%) received placebo. 18,003 people had a PCR test for Covid-19, and the result of 5,658 (31.4%) tests were positive and 12,345 (68.6%) tests were negative. Also, a total of 360 deaths occurred, of which 96 (26.7%) were due to corona and 264 (73.3%) were due to other causes. In this study, it was observed that the use of aspirin reduces the incidence of corona and death following it.

Conclusion: According to the results of this study, it seems that the use of aspirin can reduce the rate of corona by 11.7% ($p < 0.001$ and $OR = 0.883$). Also, the use of aspirin reduces the death rate caused by corona by 77.6% ($p < 0.001$ and $OR = 0.224$).

Keywords: aspirin, covid 19, placebo