

Impact of smoking cessation on depression after acute coronary syndrome

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Background: Smoking and depression are two risk factors for acute coronary syndrome (ACS) that often go hand-in-hand, as smokers are more likely to be depressed and people that are depressed are more likely to be smokers. Smoking cessation in depressed patients with ACS may worsen depressive symptoms, which could increase the risk of recurrence of cardiac events and decrease adherence to other cardiac risk-reducing lifestyle changes.

Purpose: We aimed to investigate the evolution of depression according to smoking cessation one-year after ACS. Furthermore, we investigated if there was a higher incidence of one-year depression among ACS smokers who quit in comparison to continuous smokers.

Method: Data from 1,822 patients with ACS of the Swiss multicenter SPUM-ACS cohort study were analysed over a one-year follow-up period. Participants were classified in three groups based on smoking status one-year post-ACS – continuous smokers, smokers who quit within the year post-ACS, and non-smokers. Depression status at baseline and at one-

year after the index ACS event was assessed with the Center for Epidemiologic Studies Depression scale (CES-D) and antidepressant drug use. A multivariate adjusted logistic regression model was used to calculate the risk ratio (RR) between groups.

Results: In comparison to depressed smokers who continued to smoke one year post-ACS, depressed smokers who quit smoking had an adjusted RR of 2.02 (95% CI 1.04–3.92) of improving their depression. Among 543 non-depressed ACS smokers, new depression at one-year was found in 57/266 (21.4%) smokers who quit, and 68/277 (24.6%) continuous smokers, with an adjusted RR of 0.89 (95% CI 0.58–1.36) of incidence of new depression.

Conclusion: Smokers with depression at the time of ACS who quit smoking improved more frequently their depression compared to those who continued smoking. Although not statistically significant, there was a smaller incidence of new depression among smokers who quit after ACS in comparison to continuous smokers.