

# Smoking cessation after an acute coronary syndrome

## Abstract

One of the most important secondary prevention strategies, after an acute coronary syndrome in smoking patients, is smoking cessation. To achieve this goal, in hospital counseling, pharmacological treatment and referral to a cardiac rehabilitation program are the three more relevant measures. The cessation effort must be extended post-discharge by referral to a smoking cessation program.

**Keywords:** smoking cessation, acute coronary syndrome, secondary prevention

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## Introduction

Diseases related to tobacco consumption are one of the main causes of hospital admissions, of these, cardiovascular diseases are among the most important. After a cardiovascular event such as an acute myocardial infarction with or without ST elevation, unstable angina or coronary revascularization procedure, a series of secondary prevention measures should be considered. Within these, complete smoking cessation is proposed as a primary goal.

All acute coronary syndrome management guidelines (with and without ST elevation) recommend assessing the use of tobacco, strongly recommending that the patient and family members stop smoking and avoid secondhand smoke. Proper treatment considers counseling, pharmacological therapy and entering a tobacco cessation program.<sup>1-3</sup>

## Discussion

The hospitalization of a smoker patient constitutes a great opportunity to apply measures of smoking cessation. It is a moment when patients rethink about their lifestyles and are open to changes towards healthier habits. At this time behavioral treatments involving exercise, healthy food, and smoking cessation are associated with both a short and long-time benefit. Smoking cessation reduces substantially the occurrence of new cardiovascular events and mortality at six months,<sup>4,5</sup> and accounts of an approximate 30% lower risk rate of death and myocardial infarction during the subsequent 3 to 7 years.<sup>6</sup>

In fact, various studies in patients after an acute coronary syndrome, showed that smoking cessation reduces future mortality up to approximately 50%, constituting one of the most powerful secondary prevention measures.<sup>7,8</sup> Among the most important strategies to follow in this group of patients are, counseling during hospitalization, admission to a cardiac rehabilitation program and the use of pharmacological therapy.

Regarding counseling, this should be implemented from the moment the patient is hospitalized, asking about the consumption of tobacco, advising about quitting and the benefits that this entails.

The more professionals involved in giving advice (doctors, nurses, kinesiologists, assistants, others), the more effective. Also, the intensity level of counseling leads to better results. In a review by Rigotti and cols. in Cocharane, a total hospital intervention of more than 15 minutes, associated with an after-discharge follow-up beyond the first month, was the most efficient counseling strategy.<sup>9</sup>

The use of nicotinic replacement therapy, bupropion and varenicline are the current validated pharmacological treatments for smoking cessation. Although these three drugs are accepted as therapeutic alternatives, in the patient hospitalized after an acute myocardial infarction, the effectiveness of bupropion is not clear and there are no randomized controlled studies with nicotinic replacement therapy.<sup>10</sup> Regarding nicotine replacement therapy, although there are no randomized controlled studies, its use has proven to be safe, and it is recommended once the patient is stabilized (stable hemodynamics and absence of serious arrhythmias). It can be used in patches, gums or mouth spray.<sup>8,9,11</sup>

A recently study<sup>12</sup> evaluated the use of varenicline in smokers hospitalized for acute coronary syndrome. The study showed a significantly higher rate of smoking cessation at 6 months post infarction in the group with varenicline in relation to placebo (47% vs 32%). The use of varenicline in this setting proved to be safe, showing no significant differences in cardiovascular complications.

## Conclusion

It is important to point out that achieving cessation of tobacco consumption after an acute coronary syndrome, as already mentioned, is perhaps the most effective measure in terms of preventing a new future event. In order to achieve this goal, all different therapeutic approaches, pharmacological and non-pharmacological, must be considered. These measures should be initiated during the hospitalization phase by the treating team, and controlled after discharge. All patients must receive anti-smoking counseling and enter a cardiac rehabilitation program. Pharmacological therapy should be considered in all cases. Patients with a high level of addiction must be referred to a tobacco cessation program.

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## Conflicts of interest

The author declare that there is no conflict of interest.

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