Smoking cessation interventions after Acute Coronary Syndromes. Results of a cross-sectional survey in the Lazio Region of Italy

Interventi per la cessazione del fumo dopo Sindrome Coronarica Acuta: risultati di uno studio osservazionale trasversale nella Regione Lazio

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ABSTRACT: *Smoking cessation interventions after Acute Coronary Syndromes. Results of a cross-sectional survey in the Lazio Region of Italy. F. Colivicchi, D. Mocini, M. Uguccioni, S. Strano, G. Imperoli and M. Santini for the ANMCO (Associazione Nazionale Medici Cardiologi Ospedalieri) Lazio - "Smoking Cessation Initiative".*

Given the limited research on Italian hospital smoking care practices, a cross-sectional survey was undertaken in April-May 2011 to describe the current status of smoking cessation interventions for ACS patients in cardiovascular institutions of the Lazio Region of Italy. Lazio is a region of central Italy with a resident population of about 5,600,000. According to the data of the Regional Health Authority, about 10.000 patients are admitted for ACS every year in this region of Italy. Acute cardiac care in the region is currently provided by 33 Cardiology Divisions. All of these units were considered as eligible for the survey. The eligible respondent for each unit was the director. A self-report questionnaire was developed based on previous studies that examined the specific features of smoking cessation care provided to hospitalised patients. Questionnaires were forwarded by the Lazio Regional Section of the Italian National Association of Hospital Cardiologists (ANMCO).

Completed questionnaires were received from 22 of the 33 eligible Divisions (66%). These 22 responding units currently provide acute care to about 70% of all ACS patients of the region. Responding units were more likely to represent public non-teaching hospitals (p=0.002), while non-responders were mostly from private non-teaching institutions (p=0.04). Response rates were not influenced by the presence of either interventional catheterization laboratory (Cathlab)or cardiac surgery within the hospitals.

The survey suggest that most of cardiology units fail to provide recommended smoking care interventions to ACS patients. In particular, brief smoking cessation advice before discharge represents the only systematically implemented approach in clinical practice (22 units; 100%). Smoking cessation counselling is provided only in 9 units (40%). Specific pharmacotherapy is prescribed in selected case only in about one third of units (7 units; 32%), with varenicline being the preferred drug. Structural variables and organizational complexity have no influence on smoking care, as hospitals with Cathlab and cardiac surgery do not implement more effective strategies. Overall, this survey shows that the majority of smoking ACS inpatients may receive inadequate smoking care and that hospitals have considerable opportunity for improvement.

Keywords: Smoking cessation, Acute Coronary Syndromes, Cardiovascular Prevention.

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Introduction

Complete cessation of active tobacco smoking is associated with a significant 30-40% reduction in the relative risk of death after acute coronary syndromes (ACS) [1, 2]. In light of these major benefits, active in-hospital and post-discharge interventions are currently recommended to assist smokers in quitting after ACS [3]. However, smoking cessation interventions appear to be largely underutilized in cardiovascular institutions providing acute care to ACS patients [4]. As a consequence, smoking relapse rates among smokers who have become abstinent during an admission for ACS may exceed 60% at 12 months from discharge [5].

Given the limited recent research on hospital smoking care practices, a survey was undertaken to describe the current status of smoking cessation interventions for ACS patients in a representative sample of Cardiology Divisions of the Lazio Region of Italy, which is a large area (17,000 km[2]) in central Italy with a resident population of about 5,600,000 [6].

Methods

A cross-sectional survey of smoking cessation interventions routinely delivered to ACS patients in Cardiology Divisions of acute care hospitals of the Lazio Region of Italy was undertaken in April-May 2011. Eligible services were those Cardiology Units within hospitals providing acute care to patients with ACS. The eligible respondent for each unit was the director, or a senior attending cardiologist.

A self-report questionnaire was developed based on recommendations included in the US Clinical Guidelines for Treating Tobacco Use and Dependence [7], and on previous reports that examined the specific features of smoking cessation care that can be provided to hospitalised patients [8, 9].

Smoking cessation interventions were then classified as:
1. Systematic behavioural interventions (brief advice, individual counselling, provision of self-help materials, group therapy).
2. Post-discharge support and follow-up.
3. Pharmacotherapy (such as nicotine replacement therapy, bupropion, varenicline)

A senior cardiologist pilot tested the survey structure and content, resulting in minor revisions before final distribution. Questionnaires were forwarded by the Lazio Regional Section of the Italian National Association of Hospital Cardiologists (ANMCO), which is the professional association of cardiologists working in public hospitals of the Italian National Health Service (www.anmco.it).

The survey assessed current smoking cessation interventions regarding ACS patients who were smokers, as well as hospital characteristics. Respondents were asked to complete the survey based on their knowledge of practices within their unit.

Hospitals were categorised according to the standard definitions of the Italian Cardiology Network [10]:
1. Group 1 - hospitals with only a coronary care unit (CCU),
2. Group 2 - hospitals with CCU and interventional catheterization laboratory (Cathlab),
3. Group 3 - hospitals with CCU, Cathlab and cardiac surgery

Statistical analysis

The prevalence of each type of smoking cessation intervention is reported as a proportion. Differences in the prevalence of such care strategies between different types of units were examined by χ^2 or Fisher exact test as appropriate.

Logistic regression analysis was used to examine the potential associations between type of unit and specific smoking cessation interventions. Data analysis was performed by using the SPSS statistical software package (SPSS 12.0). $P<0.05$ was considered statistically significant.

Results

Each year, in the Lazio Region of Italy about 10,000 people are hospitalised for ACS [11]. Besides, according to the Regional Health Authority, acute care for ACS in this administrative area is currently provided by 33 Cardiology Divisions [12]. All of these 33 units were considered as eligible for the survey. Completed questionnaires were received from 22 of the 33 eligible Cardiology Divisions (66%). These 22 responding units currently provide acute care to about 70% of all ACS patients of the region [12]. Characteristics of responding and non-responding divisions are provided in Table 1. Responding units were more likely to represent public non-teaching hospitals (p=0.002), while non-responders were mostly from private non-teaching institutions (p=0.04). Response rates were not influenced by the presence of either Cathlab or cardiac surgery within the hospitals as assessed by logistic regression analysis.

Table 2 summarises the prevalence of the various forms of smoking cessation intervention delivered to ACS patients in the responding units. Smoking care was not influenced by the presence of either Cathlab or cardiac Surgery as assessed by logistic regression analysis.

Discussion

This study reports the prevalence of smoking cessation interventions routinely delivered to ACS patients by acute care hospitals of a major Italian re-

Table 1. - Characteristics of responding and non-responding eligible hospitals (total number = 33)

	Responders 22 hospitals	Non-responders 11 hospitals
Public University hospitals - number (%)	1 (4)	2 (18)
Private University hospitals - number (%)	0 (0)	1 (9)
Public non-teaching hospitals - number (%)	18 (82)*	3 (27)
Private non-teaching hospitals - number (%)	3 (14) §	5 (46)
CCU only - number (%)	10 (45)	6 (55)
CCU and Cathlab - number (%)	9 (41)	2 (18)
CCU, Cathlab and Cardiac Surgery - number (%)	3 (14)	3 (27)

CCU, coronary care unit; Cathlab, interventional catheterization laboratory, * p=0.002; § p= 0.04

Table 2. - Provision of smoking cessation interventions in responding cardiology units

	Overall sample 22 units	CCU only 10 units	CCU and Cathlab 9 units	CCU, Cathlab and CS 3 units
General measures				
Brief smoking cessation advice - number (%)	22 (100)	10 (100)	9 (100)	3 (100)
Smoking care indications in discharge letter- number (%)	11 (50)	4 (40)	4 (45)	3 (100)
Counselling for smoking cessation				
Individual counselling - number (%)	8 (36)	2 (20)	4 (45)	2 (66)
With a single session - number (%)	6 (28)	2 (20)	4 (45)	0 (0)
With multiple sessions - number (%)	2 (9)	0 (0)	0 (0)	2 (66)
Delivered by physician - number (%)	4 (18)	2 (20)	2 (22)	0 (0)
Delivered by nurse - number (%)	4 (18)	1 (10)	1 (11)	2 (66)
Group counselling - number (%)	1 (4)	0 (0)	1 (11)	0 (0)
Other behavioural interventions				
Provision of self-help materials (booklets) - number (%)	4 (18)	2 (20)	1 (11)	1 (33)
Follow-up support for smoking cessation after discharge - number (%)	7 (32)	2 (20)	3 (33)	2 (66)
Pharmacotherapy				
Systematic prescription - number (%)	0 (0)	0 (0)	0 (0)	0 (0)
Prescription in selected cases - number (%)	7 (32)	2 (20)	3 (33)	2 (66)
NRT - number (%)	1 (4)	1 (10)	0 (0)	0 (0)
Bupropion - number (%)	1 (4)	1 (10)	0 (0)	0 (0)
Varenicline - number (%)	7 (32)	2 (20)	3 (33)	2 (66)

CCU, coronary care unit; Cathlab, interventional catheterization laboratory; CS, cardiac surgery; NRT, nicotine replacement therapy

gion. The results suggest that most of cardiology units fail to provide recommended smoking care interventions to ACS patients. In particular, brief advice represents the only systematically implemented approach in clinical practice, while only about 40% of respondents reported the provision of individual or group smoking cessation counselling. Furthermore, specific pharmacotherapy is prescribed in selected cases only in about one third of units, with varenicline being the preferred drug.

Another point of interest in that structural variables and organizational complexity seem to have no influence on smoking care, as hospitals with Cathlab and cardiac surgery do not implement more effective strategies.

The health care system is a key channel for delivering interventions to reduce tobacco use, which is the leading preventable cause of death in western countries and a major risk factor for cardiovascular disease. Consequently, a hospitalisation for a major cardiovascular event should always be considered a unique opportunity to deliver a structured smoking cessation intervention. However, this survey shows that the majority of smoking ACS inpatients may receive inadequate smoking care and that hospitals have considerable opportunity for improvement.

Overall, the results of this survey further suggest that healthcare providers should take smoking cessation interventions more seriously, as recommended treatments are not making their way into practice. As recommended, a successful program to help ACS patients quit smoking should take a comprehensive long-term approach, including individual counseling, post-discharge support and pharmacological treatment.

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