Why are smoking cessation strategies not implemented more effectively in clinical practice?

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It is encouraging to see how an official journal of the European Society of Cardiology devotes regular attention to different aspects of prevention of coronary heart disease.

Smoking is one of the major coronary risk factors and is responsible for 50% of all avoidable deaths, half of which are due to cardiovascular diseases.

Smoking cessation programmes have been successful in middle-aged men but recent changes in smoking rates in the female population and particularly in the young are alarming. Primordial prevention in the young receive top priority in health promotion programmes but secondary prevention in adult smokers is also necessary.

The working group report on diagnosis and treatment of nicotine dependence with emphasis on nicotine replacement therapy, published in this issue can also be regarded as a challenge for practising cardiologists to be more active in smoking cessation programmes both in primary and secondary prevention of coronary heart disease. In this report emphasis is given to the importance of nicotine dependence but also to the efficacy and safety of nicotine replacement therapy in cardiac patients. According to the authors, the health benefits of using nicotine replacement therapy to assist patients to stop smoking far outweigh any treatment-related risk. The cost-effectiveness of nicotine replacement therapy has also been demonstrated.

Physicians may have thought for too long that smoking was only a maladaptive behaviour that could be reversed by willpower only. The recognition that smokers are rapidly addictive to nicotine has enhanced our understanding of why stopping smoking is so difficult. The results of clinical trials with nicotine replacement therapy as well as with more recently developed drugs are promising. Physicians should view smoking cessation programmes in the same way as methods to detect and treat arterial hypertension and hypercholesterolaemia. All require systematic identification of the patient, a clear diagnosis, counselling, treatment and follow-up. Now that new tools are provided, the physician can intervene more effectively, especially when nicotine replacement therapy and/or drug therapy are added to strategies that have been proven effective.

However, nicotine replacement therapy is not the solution for all smokers. In a recent report from a trial in VA medical centres it was shown that nicotine replacement therapy had no effect on cessation rates at 24 and 48 weeks as compared to placebo. Indeed, we should keep in mind that smoking is addictive not only pharmacologically but also psychologically. Besides nicotine replacement therapy, other elements have been identified as predictors of success in smoking cessation programmes, such as social support and skill building. All this has been well summarized in the guideline of the Agency for Health Care Policy and Research.

Clinicians may recognise the importance of smoking cessation, but most of them fail to intervene. Some may be reluctant to take action because they do not possess the skills necessary to deal with patients who smoke.

A review of 28 major trials of advice from North American physicians to stop smoking showed that after brief advice, cessation rates were 3 to 13%. These and other results confirm that brief advice supplemented with some appropriate literature may have some success, but much more can be achieved if the provider has sufficient skills in ascertaining the smoker’s motivation to change. Studies using the transtheoretical model of change developed by Prochaska et al. have shown the benefit of identifying the smoker’s motivation to change his or her addiction before attempting smoking cessation programmes. The approach by the physician should vary depending on the stage of change (pre-contemplation, contemplation, preparation, action or maintenance). A smoker in the pre-contemplation stage will not be helped by starting nicotine replacement therapy at once but should first be informed. Different behavioural processes can be used successfully in moving the smoker from one stage to another. If the clinician is not experienced with these programmes or not willing to improve his skills in this field, he should refer the smoker to skilled and experienced health professionals.

Besides nicotine replacement therapy and behavioural skills, social support for cessation helps smokers quit. Support by the partner and family is very important in smoking cessation. Family involvement is of great help. Social support at an interpersonal level may be from the family and friends, but also from the working environment or other social groups in which the smoker lives. It was clearly documented that a well implemented worksite smoking
policy, which is fully supported by management and accompanied by cessation classes, was followed by apparent increases in smoking cessation by employees [8].

Finally, it should be emphasized that in addition to skill building, nicotine replacement therapy, prescribing bupropion and social support one should realize that tobacco places an enormous burden on public health and society as a whole. A comprehensive strategy aiming at a smoking free society is necessary, including regulatory activities, protection of non- or ex-smokers at work and during leisure time activities (restaurants, public places, transport), de-legitimization of tobacco use and de-normalization of the tobacco industry. Physicians and cardiologists should be at the forefront — leading the implementation of smoking cessation programmes in clinical practice.

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References

Heart rate variability: a telltale of health or disease

See page 475 for the article to which this Editorial refers

Heart rate variations have puzzled medical doctors ever since they began to feel their patients’ pulse. Even today heated scientific debates are devoted to interpretation of (non-pathological) heart rate variability [1–3]. However, without bothering too much about the physiological background, in clinical cardiology the predictive value of (absence of) heart rate variations is now an acknowledged risk factor, strongly associated with long-term outcome of disease in cardiac patients. In the present issue Galinier and colleagues [4] present the results of a well-controlled prospective study in chronic heart failure. One hundred and ninety patients with chronic heart failure in sinus rhythm were enrolled; after an average follow-up of 2 years 55 had died. One of the independent predictors for all-cause mortality was a low standard deviation of normal RR intervals (<67 ms) and for sudden death a daytime low-frequency power below 3·3 ln (ms²).

In this study, time and frequency domain measures have been deduced from 24-h Holter recordings. The usual short- and long-term averages for heart rate and accompanying standard deviations were computed. The problem of 24-h spectral analysis was reduced to Fourier analysis of consecutive 2-min periods and averaging the spectra. In doing so one generally can only distinguish low frequency (0·04 to 0·15 Hz) and high frequency (0·15 to 0·40 Hz) variations. Variability in heart rate in both these frequency bands is mainly vagally mediated, as has been shown by atropine blocking experiments [5]. To reliably observe frequencies lower than 0·04 Hz (variations lasting longer than 25 s) one needs periods longer than 2 min to compute the spectrum.

The conclusion from the Galinier study [4], then, would be that heart rate variations in one way or another prove a favourable pattern in response in the...