National and international nicotine dependence

Nicotine, and particularly tobacco nicotine, dependence is a serious public health issue. It matters because dependence on tobacco remains, and will remain for a long time, among the largest causes of avoidable death in both the developed and developing world [1].

This should matter to oncologists because oncologists are role models and teachers to whom the less expert look for advice. This is despite the fact that they are often the last to whom the patient is referred for management.

In this issue Gallus et al. discuss tobacco dependence in the population of Italy [2]. They applied the Fagerstrom Test for nicotine dependence to a representative sample of 6773 smokers. Their results are compatible with similar surveys but the central issue is that there is a spectrum of nicotine dependence with a minority of smokers severely dependent and a large number moderately or less severely so. Research [3] and intuition tell us that quitting is more difficult for the more dependent. Gallus’ results agree with the view that heavily dependent smokers increase as a percentage when prevalence declines.

However, the key question is what to do about global tobacco nicotine dependence? Treatment protocols exist and are widely promulgated [4]. However, analysis of practise patterns shows that helping smokers to quit is a process that varies greatly across national and international borders [5] and is not taken seriously enough by clinicians. This is less the case in the United Kingdom where a large programme of incentives and service provision has been institutionalised for which some outcome measurements are now available [6]. Almost 235,000 people were treated in 2003. The results were as might be expected—A validated four-week abstinence rate of 53%, a relapse rate from 4 weeks to 52 weeks of 75%, a validated 52 week abstinence rate of 15% at a cost of 684 English pounds per life year saved. Such a success (or failure) rate may be depressing to the inexperienced but is not greatly different to the cure rate for most types of lung cancer, which clinicians continue to treat energetically and which is much more expensive.

The UK experience demonstrates what can and should be done (urgently) but more is required. Radical and creative solutions are needed but major innovations will require political acceptance and intervention. Interference with initiation of tobacco use is a long term issue which will not affect mortality for many decades, although many countries are doing it to a substantial degree and even Formula One advertising is due to be phased out in 2006 (we may be permitted some scepticism as to whether this will actually happen). This is not remotely enough.

Probably the best place to look for improvement is the place doctors and researchers traditionally look—for new treatments. If we think a 15% 52 week abstinence rate is unsatisfactory we should ask whether the available drugs and support systems are adequate. Clearly they are not. Nicotine replacement therapy (NRT) is not doing what it ought to. In a recent study [7] of 535 new users of prescription nicotine inhalers only eight used it in such a way as to be classified as dependent. In other words NRT is not significantly addictive and, if it is to be efficacious against its tobacco competitor, it should be [8]. The situation is somewhat ridiculous in that the sources of addictive tobacco—nicotine can be bought near most street corners while non-addictive inhalers require prescription. What is needed is a reversal of the availability situation and a new generation of NRT.

A new generation of NRT, which would need to be addictive if it is to be tobacco-competitive, is needed. This will not happen unless the pharmaceutical industry is given incentives to develop it. The first incentive is an understanding that regulators will accept such a product. Regulators have no history of, or mandate for, accepting new addictive products onto markets. They cannot be expected to change unless instructed by governments. Governments are not noted for ‘courageous’ decisions and are likely to make them only if pushed.

So the conclusion is that governments need to be pushed into encouraging addictive new NRT preparations and that oncologists should be lobbying them to do this. Is this risky? Yes, of course it is. The risks include the possibility that non-smokers will take up the drug; that smokers will use both types of nicotine; that it will be a gateway drug for tobacco (improbable but possible); that in the extreme case we will replace a generation of tobacco users with a generation of non-tobacco nicotine users; and that, despite the good safety record of NRT [9], that long term use will throw up new nicotine attributable disorders.

These risks are, however, trivial compared to the risks of the status quo in which we face widespread and global tobacco addiction with all its disease implications.

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References