EDITORIAL

NICOTINE CONTENT AND RISKS

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The growing epidemic of tobacco is a concern to all health care providers. Its dangers regarding cancer, heart, lung diseases and addiction potentials are well known for decades. The tussle between tobacco industry and health providers is also not new. The former have tried in many ways to offset, or pose to neutralize, the dangers by various ways.

Claims that cigars, bidi and shisha are safer than cigarettes have all proven wrong. Comparing 12 brands of bidi (hand rolled cigarettes) from India with 8 conventional cigarette brands, a US study found out that nicotine concentration in the tobacco of bidi cigarettes was significantly greater than the tobacco from the commercial filtered and unfiltered cigarettes¹. The recent Shisha, or hukka, epidemic has largely focussed on youth with an impression that there is no or minimum tobacco which is filtered through water. These myths have also been proven wrong².

The latest eye shed is the 'light' or 'low tar' cigarettes. Promotion of filtered and low tar cigarettes are intended to console smokers about the health risks of smoking; such efforts were found successful in getting smokers to adopt filtered and low yield cigarette brands³. In a Chinese study, 71% of smokers interviewed perceived light or low tar cigarettes to be less harmful⁴. Alternatively such efforts may be targeted towards older smokers in an attempt to prevent them from quitting⁵.

In this issue of the journal, Tahira Mehmood and Mukhtiar Zaman have pointed out towards a relevant issue; of displaying the nicotine content on cigarette packs in Pakistan⁶. While a requirement in the west, it has largely escaped attention of those concerned in our country. Nicotine is a powerful addictive substance largely responsible for the continued 'hooking' effect. It does so by acting on the nicotine cholinergic receptors in the brain triggering release of dopamine and other neurotransmitters which promote tobacco dependence⁷. By lowering Nicotine content in cigarettes the motives of the pharmaceutical industry may be the same; to let the smoker continue with the habit thinking that he has switched to a safer alternative. However as it has been pointed out, this is not the case. In fact it has been shown that smoker's brain decides how much nicotine to extract. In 'light' cigarettes this is done by inhaling deeply. Therefore the more you smoke the more you are exposed to the dangers of tobacco and its contents.

In a way it can be said that the 'light' cigarettes are more dangerous by letting the smoker continue on something he might have attempted to give up.

The authors' recommendation in this issues paper of reducing the nicotine content may therefore serve no benefit to those smokers who are already addicted to this substance. However for those youngsters who are just beginning to take up this habit, lowering the nicotine content in cigarettes might make them less likely to get hooked on to this powerful addictive substance. Their demand of displaying the nicotine content on cigarettes packs is in line with international laws. It is of importance as far as human rights are concerned, but it may still be argued as to how many of Pakistani smokers will read or be bothered about the content, high or low. So the demand is to be supported but with an open mind that it is not

the *ultimate*. The safest strategy in tobacco, as we all know, is to stop and continue to stop smoking. Respiratory physicians' efforts should be targeted towards more tobacco cessation clinics and more counselling sessions with their smokers. Respiratory doctors can also play their role in tobacco control by demanding implementation of smoke free policies in the country.

REFERENCE

- Jennifer L Malson, Kristi Sims, Ram Murty, Wallace B Pickworth. Comparison of the nicotine content of tobacco used in bidis and conventional cigarettes. Tob Control 2001;10:181-183
- 2. Hadidi KA, Mohammed FI. Nicotine content in tobacco used in hubble-bubble smoking. Saudi Med J. 2004 Jul; 25(7):912-7.
- 3. R Pollay and T Dewhirst. The dark side of marketing seemingly "Light" cigarettes: successful images and failed fact. Tob Control. 2002 March; 11(Suppl 1): i18–i31.
- 4. T Elton-Marshall, G T Fong et al. Beliefs about the relative harm of "light" and "low tar" cigarettes: findings from the International Tobacco Control (ITC) China Survey. Tob Control. 2010; 19(Suppl_2): 54-62.
- 5. Janine K. Cataldo, RN, Ruth E. Malone. False promises: The tobacco industry, "low-tar" cigarettes, and older smokers. J Am Geriatr Soc. 2008 September; 56(9): 1716-1723.
- 6. Tahira Mahmood, Mukhtiar Zaman. Comparative Assessment of Total Nicotine Content of the Cigarette Brands Available in

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Peshawar, Pakistan. Pakistan Journal of Chest Medicine 2010; 16 (3): 3-7

7. Benowitz NL Nicotine addiction. N Engl J Med 2010; 362(24): 2295-303