118

Author B reply

Non-cigarette use of tobacco causes harm to humans

This is in reply to Professor Tony Axéll's letter commenting on my editorial on 'Smokeless Tobacco and Oral Cancer' (Wanakulasuriya, 2004) and the accompanying case report of a lip carcinoma in a Swedish male after prolonged Snus use authored by Zatterstrom *et al* (2004), both of which appeared in Oral Diseases Volume 10, Number 1.

This response relates to the points raised by Professor Axéll to my editorial. The editorial widely covered many forms of smokeless tobacco used in different parts of the world and their potential toxic effects on oral tissues. Smokeless tobacco (ST) consists mainly of two types; snuff and chewing tobacco. Snus is the name given to snuff made in Sweden and consumed largely in Sweden and in other parts of Scandinavia. The International Agency for Research on Cancer (International Agency for Research on Cancer (IARC), 1985) evaluated the carcinogenicity of ST and concluded that there is sufficient evidence that oral use of snuffs of the types commonly used in North America and Western Europe is carcinogenic to humans.

In my editorial I considered two Swedish publications that appeared subsequent to the IARC evaluation in 1985 and commented that both of these studies did show moderate risks, particularly in one of them for lip cancer in ex ST users. Even for smokers in their study cohort, the risks for head and neck cancers were low or negative which suggested the lack of power of the studies to determine the risk exposures. Other researchers (Critchley and Unal, 2003) who have comprehensively evaluated published studies on ST also came to the conclusion that '... recent Scandinavian studies do not have sufficient power to detect moderately raised odds ratios'.

The scientific value of an editorial is to critically evaluate the data and not to simply restate what the authors may have concluded following their research studies. Perhaps the usefulness of my editorial to the scientific community may be judged by the number of references to it in subsequent literature. An electronic search suggests 451 have accessed/downloaded the editorial, 182 the PDF version, 212 the HTML version, all via Synergy, and 215 authors have referred to the editorial subsequently, all within a year.

Professor Axéll, in his letter, comments that the oral cancer found in the patient described in Zatterstrom case report (referred to as Article A) could have been caused by the removable denture worn by the patient! Though rare in scientific writings, such arguments are well known, and are often put forward when tobacco in the eye of some critics is arguably not the cause of cancer.

Professor Axéll refers to an abstract from a scientific meeting by Roosaar (2002) which to my knowledge has not been published as a full article. This is a 20-year follow-up of patients detected with 'snus induced lesions'. It should be possible for the authors to demonstrate that mortality among subjects with a known snus lesion (and particularly those detected with grade 3 or 4 lesion) was not significantly higher than in non-users or smokers; neither the abstract nor the presentation contained this information. As their results were not published it is not possible to critically evaluate the study.

In summary, my editorial presented a critical evaluation of scientific papers on the risk of ST use and commented on areas where the knowledge was deficient. Overall, ST in any form contributes to an increased risk for oral cancer in the population and possibly other sites as well, e.g. pancreas. Users should therefore be adequately informed of this risk. Proponents of snuff have applied the concept of harm reduction. In this context a recent scientific evaluation of health consequences of ST by an IARC Expert Group (Cogliano *et al*, 2004) has concluded 'smokeless tobacco is carcinogenic to humans'. What was stated in my editorial is in agreement with these recent IARC findings.

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