Reviewer's report

Title: Review of the relation between European and American smokeless tobacco and non-neoplastic oral disease

Version: 1 Date: 28 November 2007

Reviewer: Tony Axéll

Reviewer's report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Kallischnigg G, Weitkunnat, Lee PN

Review of the relation between European and American smokeless tobacco and non-neoplastic oral disease

Referee report

This study is an extensive and knowledgeable review concerning smokeless tobacco products in Europe, especially Scandinavia or Sweden, and USA.

In order to be meaningful such a review has to be adequately structured and considering up-to-date consensus points of view. I find the present review lacking in some of these aspects.

Especially three aspects have to be reconsidered. The authors throughout their article use the label "leukoplakia" in their review, even if they also consistently add "or related lesions". This is unfortunate. Leukoplakia is a precancerous lesion and a precancerous trait has never been demonstrated concerning snuff induced lesions. (see e.g. Roosaar et al. 2006) On p. 19 the authors also state “ST use clearly increases the risk of oral leukoplakia”, which thus is misleading.

At several concensus meetings snuff induced lesions have been considered
different from leukoplakias since they comprise a unique entity, since they are far from always white and since their precancerous potential is not clarified (Axéll et al 1984, Axéll et al. 1996, Zain et al. 1996). In the report by Zain et al. is stated “A localized lesion of the oral mucosa corresponding to the regular site of placement of a quid and characterized by one or more of the following characteristics: 1) change of normal color, 2) wrinkled appearance, 3) thickening of the mucosa, 4) scrapable or non-scrapable epithelial surface, and 5) presence of ulceration.

Examples of such quid-induced lesions are: i. Tobacco and lime user’s lesion; ii. Snuff-induced lesions; and iii. Areca-quid lesion”

Thus, lesions caused by snuff should preferably be renamed for e.g Snuff-induced lesions (SIL) suggested by Roosaar et al 2006.

Studies in Europe and US should be separted in the analyses primarily since the products used may differ considerably. Further, studies carried out on snuff (SIL) should be separately analysed from those carried out on chewing tobacco (CTIL?). Snuff and chewing tobacco are quite different products. For instance, using chewing tobacco in Sweden gives rise to only subtle mucosal changes (Axéll et al. 1992). Further, Swedish chewing tobacco may cause erosions on dental surfaces (Birkhed and Malmberg 1982).

The most extensive epidemiologic study on Swedish snuff (snus) users was published in 1976 (Axéll 1976). 1466 SILs were encountered, a prevalence of 8% in 20,333 individuals aged 15 years and over (16% in men and 0.2% in women). A lesion was found in almost all snus users. In 551 users consuming 11 g snus a day a SIL was not registered in 32 individuals (5.5%). On the other hand in 187 individuals or 1 % of 18,701 individuals a SIL was registered in spite of the fact that they denied using snus. A sample of these 1466 SIL’s was followed for about 30 years. The result was published by Roosaar et al. 2006.

In summary,

This review is an important, extensive and knowledgable one. It should preferably be restructured with emphasis on the following.

1. separate accounts for chewing and snuff (snus) products
2. separate accounts for USA and European studies
3. change of the label leukoplakia for other ones e.g. snuff induced lesion (SIL) and chewing tobacco induced lesion (CTIL)

References


**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'