Reviewer’s report

Title: Prevalence of HPV high and low risk types in cervical samples of the Italian general population: a population based study.

Version: 1 Date: 22 March 2010

Reviewer: Santiago Melón

Reviewer’s report:

Review of the manuscript entitled “Prevalence of HPV high and low risk types in cervical samples of the Italian general population: a population based study”

With the introduction of the new HPV vaccine and the access to more sophisticated technology, manuscripts like this are important to know the importance of HPV infection, their characteristics and their evolution, and then develop strategies to prevent their consequences. In this way, the manuscript recollected a lot of women to reassert their results from different places in centre and south Italy.

In general, I think that the authors has a good material, but it is not always very well balanced, and it need a revision.

Introduction and objective

According to the discussion and the specific section (Systematic review), I think that a second objective should be added: “compare the data with other Italian studies”.

Material and methods

In Population, the population (total women) covered in the areas tested should be added.

In Samples collection, the reference or composition of the media to collect the samples must be included.

In HPV testing, the reference of HCII is needed. The abbreviations must be included after a first description, and always the same (i.e. hr or HR).

In Typing process, it could be good to include the concentration of primer set Digene and reference. Is it not too low the annealing temperature (38ºC)?

Hybridization methods is too large, particularly in revelation system, when below they don´t explain PCR condition for typing HPV-6 or HPV-11. A better balance could be possible without information loss.

In Systematic review, like I mentioned above they must explain why they include this section. I think that could be another objective.

Results

Don´t start a sentences with a number. In this section for better comprehension is
necessary to include the most amount of data, and not only use percentage. Also, percentage in figure 1 must be 100% in Y axe, or at least same value (i.e. 25%). In this figure, is significative the slope in section 1a in any case?. The value of p must be included in text.

In Typing, there is a mistake in “293 displayed infection by lrHPV”. It will be 293 hrHPV.

I suppose that the difference between 350 women with hrHPV, and 380 hrHPV positive samples are due to mix infection.

In this section, table 3 cannot precede to table 1 and 2. I suggest to change the order (because it is not completely correct to talk of mix infection before to describe genotypes found), or simply change the numbers of tables.

The legend in table 1 could be better “Distribution of HPV types by age and centre”. In this table, it can have a confusion between line “All age” and “25-64 years” according the numbers: a line of separation would be good.

Why the type of the 3 remaining cases of CINI are not included?. How can the authors explain types found by hybridization from HCII positive, which are not included in this method?. Why they can not type 100 samples?

Discussion

In discussion, the authors include reference to table 4 and figure 2 that they must be related in Results.

A explanation or suggestion why the prevalence is similar in screening programs than in studies with a population attending gynaecological clinics or high-risk populations is needed, moreover when lesions in this second group are higher.

The explanation that cancer is lower in south Italy because less HPV test are made could be incomplete, especially when HPV-test coverage is extremely lower. And the idea that are increasing now by sexual behaviour is not completely true. I think that the fact of low coverage of HPV-test underestimate the infection. Indeed, the numbers of cases of cancer are very similar. The authors must explain better this point, because social situation, facilities of screening and more sensitive methods could influence in the data.

I miss a paragraph about types of HPV found, and differences in methods, like written above in last two sentences of results.

Conclusions

Except last sentence, conclusions are not true conclusions of the work, but suggestions, and they must be included in discussion.

Abstract

According all comments made before, I think that objective and results are incomplete, for instance to make first conclusions. The last two paragraph in results are conclusions (without p), I expected numbers: “the prevalence in Sardinia was X%, in ...Y% .... (p<0.00005)”. The second conclusion is a suggestion.