Reviewer's report

Title: High-risk Human Papillomavirus Infection is associated with Premature Rupture of Membranes

Version: 2 Date: 7 March 2013

Reviewer: LUIS GOMEZ

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OVERVIEW:

In this descriptive study, the authors sought to study the association of high-risk HPV with various adverse pregnancy outcomes. The papers was written well and the statistical methods are well applied but the results are vague and do not clarify the association of this infection with preterm premature rupture of membranes, a topic of clinical relevance.

I have some observations, questions and suggestions for the authors.

MAJOR COMPULSORY REVISIONS:

- Premature rupture of membranes (PROM) is defined with no criteria of gestational age. PROM at term does not have the same clinical impact as PROM that occurs preterm (PPROM), especially when PPROM occurs before 34 weeks. I think that this is the major limitation of this paper: it does not detail if HR-HPV is more prevalent in the cohort that experiences PPROM especially <34 weeks.

- There is no mention to the role of known historical confounders for PPROM and spontaneous preterm delivery, such as previous PPROM, tobacco use, other genital infections.

- Why did the authors decide to test for the detection of HR-HPV at 6 weeks postpartum and not during the early prenatal care before delivery? Wouldn’t it better to test at the first prenatal visit? The virus has a slow incubation period, but how can the authors assure that HR-HPV detected one-and-a half month after delivery is responsible for adverse outcomes that took place antepartum?

MINOR ESSENTIAL REVISIONS:

- The authors do not specify where in the female genital tract samples were obtained; I assume it was in the cervix but this needs to be written.

- Gomez et al (reference 4) described the association of HPV with spontaneous preterm birth. Instead of studying the association with all spontaneous and indicated preterm birth, could the authors describe the association only with spontaneous preterm delivery? The authors also should include a cohort of spontaneous preterm delivery before 34 weeks.

- Hermonat et al (reference 3) reported the association of HPV with first trimester losses. The authors should report also the association of HPR-HPV with miscarriages.
- Did the authors also test the placenta for HR-HPV? It would have been interesting to assess the correlation with positive HR-HPV in the genital tract.

DISCRETIONARY REVISIONS:
- The Discussion section is too large and scattered; it should be more focused and oriented to the main findings.

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.