Jani et al. have investigated measles immunity among 6 and 9 months old infants from Mozambique. Oral fluid samples were obtained from infants and their mothers on the same day. Measles IgG and IgM were measured in the oral fluid samples using the Microimmune® EIA. The aim was to investigate whether children born to vaccinated mothers would be less long protected by maternal antibodies than children born to mothers which had natural measles infection. However none of the mothers could document their vaccination status and the large majority was not sure if they had been vaccinated or not. Moreover there was no difference in measles IgG seroprevalence between children born from mothers, which were born before or after the implementation of the national immunization programme. Was there any difference for the mothers? Surprisingly a higher seroprevalence was observed in 9 months old children (31%) than in 6 months old children (14%), although none of the children had been vaccinated. The authors suggest that this observation would be best explained by subclinical measles infections in the children, since none of the mothers recalled active clinical measles in their children. However only sporadic cases (How many??) were reported during the study period in the corresponding area. Thus there weren’t many opportunities for contacts with measles patients. The fact that none of the children had active clinical measles further confirms that wt virus circulation must have been very low.

On the other hand some children were IgM positive, and some others were IgG positive although their mothers were IgG negative. The authors suggest that these results further confirm that some of the children had subclinical measles. However the specificity of the IgG ELISA was relatively low (86.7%), thus a number of children born from seronegative mothers may have been tested false positive. On the other hand Kremer et al. (Kremer, J. R. and C. P. Muller (2005). "Evaluation of commercial assay detecting specific immunoglobulin g in oral fluid for determining measles immunity in vaccinees." Clin Diagn Lab Immunol 12(5): 668-70) have shown that measles IgG testing in oral fluid gave many false negatives in the Microimmune EIA when compared to serum IgG, especially when serum antibody levels were low. Sensitivity and specificity of the EIAs used must be taken into account for the discussion of the results.

Moreover the authors claim that only 58% of the seronegative 9 months old children seroconverted after vaccination, on the basis of IgM positivity at 15 days post vaccination. However, if both IgM and IgG positivity at 15 days post vaccination are included, the seroconversion rate is about 85%, which is well in
line with previous studies. There is no reason not to include IgG+/IgM- children in
the group of those which have seroconverted since all of them were IgG- before
vaccination, and it is well known that measles IgM after vaccination may be very
low.

Due to the “apparently” low seroconversion rate after vaccination at 9 months of
age and the lower IgG seroprevalence in 6 months old children compared to 9
months of children, the authors suggest to vaccinate children at 6 months of age.
However the true seroconversion rate was probably much higher (see above)
and none of the children developed clinical measles although there seemed to be
many opportunities for infections as suggested by the putative subclinical
infections. Thus the conclusions of this paper are not consistent and should be
reconsidered before publication of the manuscript.

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

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Declaration of competing interests:

I declare that I have no competing interests