Reviewer’s report

Title: Merkel cell polyomavirus and trichodysplasia spinulosa-associated polyomavirus DNAs and antibodies in blood among the elderly

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Reviewer: Vincent Foulongne

Both Merkel cell polyomavirus (MCPyV) and Trichodysplasia Spinulosa associated virus (TSPyV) are newly described human polyomaviruses beside also HPyV6, 7, 9 and more recently HPyV10 (close to Malawi PyV). These two viruses appear to be associated to respectively MCC and Trichodysplasia Spinulosa, two rare diseases in immunocompromized patients. This was further extensively confirmed by others. However, these viruses (mainly MCPyV) may be also present as innocent bystander and there is now an abundant literature that described the presence of MCPyV DNA in various clinical situations (non melanoma skin cancer, KSV…..). Furthermore, many studies have reported a significant detection of the viral DNA in the skin of healthy persons and serologic investigations have shown that most individuals have been infected by these two viruses with high seroprevalences as common features for MCPyV and TSPyV as well as for the other new human polyomaviruses, HPyV6, HPyV7 and HPyV9 thus supporting the hypothesis of highly ubiquitous viruses.

The epidemiologic investigation of Sadeghi et al., is clearly in line with these above statements and does not provide significant new additional data.

Serological data are confirmatory and molecular detection of MCPyV DNA in the blood of elderly is in line with the similar frequent detection in various subset of immunocompromized patients that is furthermore a common feature of human polyomaviruses.

1- Since MCPyV is common on skin surfaces of most individual with in some patient high viral load, could the low level of detection in blood be a consequence of the sampling venipuncture?

2- Previous discrepencies described in the literature between Lt and VP PCR where mostly explained regarding the likely integrated of not status of the virus in tumor samples rather than sensitivity differences. This is more unlikely with he expected episomal presentation of the virus in blood.

3- The link between VP1 detection and respiratory diseases is confusing and need clarification...;

4- It would have been of interest to compare antibody levels with the detection of viral DNA,

Level of interest: An article of limited interest
Quality of written English: Acceptable

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