**Reviewer's report**

**Title:** Effects of tofacitinib on the clinical features of periodontitis in patients with rheumatoid arthritis: two case reports

**Version:** 0  **Date:** 29 Nov 2018

**Reviewer:** Susanna Proudman

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This manuscript is said to be the first describing a response to tofacitinib in periodontal disease in 2 patients with RA.

This is of interest given the similarities in the pathogenesis of these 2 diseases and the potential for immunosuppression with DMARDs such as tofacitinib to increase periodontal disease to the extent that it is driven by microorganisms such as P. gingivalis.

There were improvements in periodontal markers following commencement, likely to a clinically significant degree. Interestingly, the same cannot necessarily be said of the RA response to tofacitinib. The changes in RF and CCP titres are not likely to be clinical significant and the changes in other clinical and serological parameters, apart from the patient global assessment were underwhelming, perhaps due to the otherwise good control of RA at initiation of the tofacitinib.

For example, in case 1, it is stated that tofacitinib was started due to secondary failure of adalimumab yet the joint scores and CRP were normal or low (high SDAI driven by high PGA). These low scores at initiation prevent comparisons between response in RA disease activity (bar PGA) and responses in PD parameters being drawn. The responses in IL-6 and TNF are more convincing and consistent with a biological benefit in RA with tofacitinib.

The authors state "Case 1 showed an increasing trend in not only the disease activity of RA but also the periodontal inflammation at baseline despite having received ADA therapy for 42 months". No data prior to the baseline measurements are reported so this statement is not supported by evidence in this manuscript.

The concluding statement that tofacitinib has a beneficial effect on PD may be "through its inhibitory effects on the serum proinflammatory cytokines" is speculative and more research is required to understand the relationship between PD and use of tofacitinib.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
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No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

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