

Periodontal disease effects on adverse pregnancy outcomes- an immunological footprint: A systematic review

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Background: Scientific literatures demonstrate the hypotheses that periodontal disease, as a source of subclinical and persistent infection, may induce systemic inflammatory and immunological responses that increase the risk of adverse pregnancy outcomes. This study aim to examine the existing evidence on the relationship between periodontal disease and adverse pregnancy outcomes.

Materials and methods: With a proper search strategy which include MeSH and non-MeSh words, an electronic and also hand searches for proper studies were performed. Inclusion criteria was observational studies (i.e. case-control, crosssectional, and cohort) and non-randomized controlled studies or randomized controlled trials that examined periodontal disease as a risk factor for adverse pregnancy outcomes. and publish time limit set for recent 10 years until March 2019. Eligible studies were assessed for validity, quality, and bias using CASP appraisal tool with separated operators.

Results: The selected studies focused on preterm low birthweight, low birthweight, preterm birth, birthweight by gestational age, miscarriage or pregnancy loss, and preeclampsia. A great part of studies suggested an association between periodontal disease and increased risk of adverse pregnancy outcome which in contrast another literature found no evidence of an association. Three clinical trial studies suggest that oral prophylaxis and periodontal treatment can lead to a more than 50% reduction in preterm low birthweight and a great reduction in preterm births.

Conclusions: Periodontal disease with increase of inflammation and through immunological paths may be associated with an increased risk of adverse pregnancy outcome. However, further integrated and well-designed studies seem to be needed for confirmation.

Biography

Heliya Ziaei completed her masters in Tehran university of medical sciences International Campus, Iran. She is working as a assistant professor in Tehran university of medical sciences. She has published many articles in reputed international journals.