**OPEN ACCESS** 

ISSN: 1874-2106

## Herbal Medicine as an Adjunct in the Treatment of Periodontal Diseases - A Systematic Review



Akram Nabil Abu Tamam<sup>1</sup>, Bhavna Jha Kukreja<sup>1</sup>, Srinivas Sulugodu Ramachandra<sup>2</sup>, M Sesha Reddy<sup>2</sup>,\*, Jovita Lawrence D. Souza<sup>2</sup> and Hossam Abdelatty Eid Abdelmagyd<sup>3</sup>

<sup>1</sup>Preventive Dental Sciences Department, College of Dentistry, Gulf Medical University, Ajman, UAE, 4184

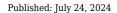
## © 2024 Abu Tamam et al.

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: https://creativecommons.org/licenses/by/4.0/legalcode. This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



\*Address correspondence to this author at the Preventive Dental Sciences Department, College of Dentistry, Gulf Medical University, Ajman, UAE; E-mail: seshaperio5@gmail.com

Cite as: Abu Tamam A, Kukreja B, Ramachandra S, Reddy M, Souza J, Abdelmagyd H. Herbal Medicine as an Adjunct in the Treatment of Periodontal Diseases - A Systematic Review. Open Dent J, 2024; 18: e18742106295311. http://dx.doi.org/10.2174/0118742106295311240419074231





Send Orders for Reprints to reprints@benthamscience.net

## PRISMA CHECKLIST

Section and Topic	Item #	Checklist item	Location where item is reported	
TITLE				
Title	1	Identify the report as a systematic review.	Yes, Page 1	
ABSTRACT				
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	Yes in Abstract	
INTRODUCTION				
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	Yes Page 2	
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	Yes page 2	
METHODS				
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	Yes Page 3	
Information sources	6	Specify all databases, registers, websites, organizations, reference lists, and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Yes Page 3,5	
Search strategy	7	Present the full search strategies for all databases, registers, and websites, including any filters and limits used.	Yes page 3	
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	Yes page 5	
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and, if applicable, details of automation tools used in the process.	Yes Page 3	

<sup>&</sup>lt;sup>2</sup>Preventive Dental Sciences Department, College of Dentistry, Gulf Medical University, Ajman, UAE

<sup>&</sup>lt;sup>3</sup>Periodontics College of Dentistry City University Ajman, Oral Medicine and Periodology Department, Faculty of Dentistry, Suez Canal University Ismailia Egypt, UAE

Section and Topic	Item #	Checklist item	Location where item is reported	
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	Yes page 4	
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	No	
Study risk of bias assessment	11	Specify the methods used to assess the risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	Yes page 4	
Effect measures	12	Specify the effect measure(s) (e.g., risk ratio and mean difference) used in the synthesis or presentation of results for each outcome.	No	
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	Yes page 3	
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics or data conversions.	No	
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	No	
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta- analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	No	
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	No	
	13f	Describe any sensitivity analyses conducted to assess the robustness of the synthesized results.	No	
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	No	
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	No	
RESULTS				
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	Yes Page 3	
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Yes page 3	
Study characteristics	17	Cite each included study and present its characteristics.	Yes page 5	
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	Yes page 4	
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and it's precision (e.g. confidence/credible interval), ideally using structured tables or plots.	Yes Table 1 page 5	
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	Yes Table 1 page 5	
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	No	
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	No	
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	No	
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	No	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	No	
DISCUSSION			-	
	23a	Provide a general interpretation of the results in the context of other evidence.	Yes page 6	
Discussion	23b	Discuss any limitations of the evidence included in the review.	Yes page 7	
	23c	Discuss any limitations of the review processes used.	Yes page 7	
OTHER INCORMATIO	23d	Discuss the implications of the results for practice, policy, and future research.	Yes page 7,8	
Registration and protocol	24a	Provide registration information for the review, including the register name and registration number, or	The review was	
		state that the review was not registered.	not registered	
	24b	Indicate where the review protocol can be accessed or state that a protocol was not prepared.	No No	
	24c	Describe and explain any amendments to information provided at registration or in the protocol.  Describe sources of financial or non-financial support for the review and the role of the funders or	No	
Support  Compating interests	25	sponsors in the review.	No	
Competing interests	26	Declare any competing interests of review authors.	No	

Section and Topic	Item #	Checklist item	Location where item is reported
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Yes page 4