

ENTREQ checklist (Enhancing transparency in reporting the synthesis of qualitative research)

Item No.	Guide and Description	Report Location
1. Aim	To evaluate the utility of sphenoid mucosal flap for sellar reconstruction after transsphenoidal surgery.	Objectives and Introduction
2. Synthesis methodology	Thematic synthesis	Methods – <i>Data synthesis</i>
3. Approach to searching	The search was pre-planned. Comprehensive search strategies combining database searching with manual search methods were undertaken.	Methods – <i>Search strategy</i>
4. Inclusion criteria	Eligibility criteria were (1) original articles till May, 5, 2023; (2) English only; (3) application of sphenoid mucosal flap after transsphenoidal surgery.	Methods – <i>Study selection</i>
5. Data sources	A systematic literature review was performed based on Cochrane, EMBASE, PubMed, Scopus, and Web of Science databases.	Methods – <i>Search strategy</i>
6. Electronic Search strategy	Following keywords and their combinations „sphenoid mucosa”, „sphenoid sinus mucosa”, „sphenoid mucosal flap”, „sphenoid sinus mucosal flap” were entered into each database. Figure 1 and Methods provide an overview of the database search.	Methods – <i>Search strategy</i> <i>Figure 1 - ENTREQ flow diagram for selected studies</i>
7. Study screening methods	Two independent reviewers screened study titles and abstracts for suitability against inclusion and exclusion criteria. The decision to include or exclude a study was required to be agreed on by both reviewers.	<i>Figure 1 - ENTREQ flow diagram for selected studies</i>
8. Study characteristics	Table 1 presents the characteristics of the included studies.	Table 1 - Summary of all SMF studies characteristics
9. Study selection results	A flow diagram using ENTREQ guidelines for reporting of systematic reviews is presented in Figure 1 in reporting of the selection process and results. We identified 749 studies after removing duplicates and excluded 741 studies for the following reasons: 1) the title and /or abstract did not match selection criteria; 2) studies irrelevant when applied to inclusion criteria. In addition, we included two studies after related article search. As a result, we included 10 studies in qualitative synthesis.	<i>Figure 1 - ENTREQ flow diagram for selected studies</i>
10. Rationale for appraisal	Quality appraisal using Critical Appraisal Skills Program (CASP) guidelines was conducted for all potentially relevant studies by two reviewers (P.S. and M.P.). Each selected study was appraised for quality and internal validity according to the CASP checklist for qualitative research.	Methods - <i>Quality appraisal</i>

	The CASP checklist contains 10 questions to assess the quality of qualitative research.	
11. Appraisal items	Critical Appraisal Skills Program (CASP) guidelines were used to appraise qualitative evidence syntheses findings.	Methods - <i>Quality appraisal</i>
12. Appraisal process	Quality assessment was carried out independently by two reviewers (P.S. and M.P.) and discussed if consensus was required.	Methods - <i>Quality appraisal</i>
13. Appraisal results	Appraisal results are presented in Supplemental Content CASP Checklist.	Supplemental Content CASP Checklist
14. Data extraction	For organization of extracted data, a unified matrix was utilized to record specific characteristics of included studies. Extracted data comprised: reference details (author, year, title, journal/publisher), objectives or aims of the study, study design, ethics(how ethical issues were addressed), sampling methodology, sample size, indication for sellar reconstruction, anatomical aspects, description of operative technique, complications and outcome after surgery.	Methods – <i>Data extraction.</i>
15. Software	Qualitative software was not used.	None used
16. Number of reviewers	Two reviewers were involved in the coding and analysis (P.S. and M.P.).	Methods – <i>Search strategy</i>
17. Coding	Two reviewers carried out line-by-line coding, grouping of codes and generation of descriptive themes (P.S. and M.P.).	Methods – <i>Search strategy</i>
18. Study comparison	During readings of the studies, similar findings were coded into descriptive themes within and across studies.	Methods – <i>Data synthesis</i>
19. Derivation of themes	The process of acquiring the descriptive themes from initial codes were inductive to assess previously researched phenomena.	Methods – <i>Data synthesis</i>
20. Quotations	Literature quotations provides example of quotations from included studies which were used to code into descriptive themes.	Literature quotations
21. Synthesis output	The review focused on the utility of SMF for skull base reconstruction after transsphenoidal surgery. In our qualitative review 3 descriptive themes: surgical techniques, advantages and limitations were generated. Through this systematic qualitative review and synthesis, all essential features of SMF application were summarised.	Table 1 and 2 Figure 1 and 2