INPLASY PROTOCOL

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Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest:
None declared.

Knee osteoarthritis guidelines lack a comprehensive consideration of multiple influencing factors from evidence to recommendations: a systematic survey

Gao, YC[1]; Cao, R[2]; Liu, ZH[3]; Si, CW[4]; Wang, YJ[5]; Tian, PC[6]; Zhuang, XY[7]; Tao, LY[8]; Liu, MJ[9]; Chai, QY[10]; Luo, MJ[11]; Feng, YT[12]; Fei, YT[13].

Review question / Objective: To systematically evaluate the use of the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approaches and factors influencing the formation from evidence to recommendations in the knee osteoarthritis (KOA) related clinical practice guidelines (CPGs).

Information sources: Two English-language databases (PubMed, Embase) and four Chinese-language databases (China National Knowledge Infrastructure, VIP Database for Chinese Technical Periodicals, Wanfang, and Chinese Biomedical Literature Database).

INTRODUCTION

Review question / Objective: To systematically evaluate the use of the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approaches and factors influencing the formation from evidence to recommendations in the knee

osteoarthritis (KOA) related clinical practice guidelines (CPGs).

Rationale: Knee osteoarthritis (KOA) is the most common chronic joint disorder, with pain, stiffness and limitation of joint movement as the main symptom, and with the local inflammation and joint structure destruction in the joint structure as the pathological characteristics. Knee osteoarthritis is one of the leading contributors to the global burden of musculoskeletal disease, There is general agreement that the burden on the health system increases year by year. A considerable number of KOA clinical practice guidelines (CPGs) are currently published internationally, serving as important guideline documents for clinical practitioners to assist in clinical decision-making to relieve pain in patients and improve physical function.

Evidence-based clinical practice guidelines (CPGs) balance the evidence generated by the systematic review and other factors influencing the formation of recommendations, to help clinical practitioners to make reasonable, evidence-based decisions in specific practice contexts. Thus, the quality control of the guidelines is crucial. The widespread use of the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approaches improves the quality of CPGs development. On the one hand, CPGs take into account multiple influence factors (e.g., quality of evidence, balance between desirable and undesirable effects, patient values and preferences, resource utilization, etc). Implementation of CPGs is less useful, or even questionable, due to the failure to take into account the combined influence of factors, leading to the neglect of important factors in the formulation of recommendations. On the other hand, certainty of evidence, as one of the key determinants of recommendations, should be based on sufficient research evidence, and it should have a reasonable relationship with the strength of recommendations. Failure to ensure consistency between the certainty of evidence and the strength of recommendations violates the key principles of evidence-based medicine, and there is a risk of misleading guidance. In addition, when forming the recommendations, attention should be paid to the interpretation of the recommendations to make the CPGs more specific and practical.

There were many existing studies on the overall quality of KOA CPGs, evidence quality and content analysis of recommendations. However, there is still lacking of methodological studies on the factors of the formation of recommendations that influence expert judgment. This study systematically surveyed KOA CPGs, and comprehensively summarized the influencing factors considered by their recommendations, and critically appraised the correspondence between the certainty of evidence and strength of recommendations, as well as an unambiguous interpretation of recommendations.

Condition being studied: Not applicable.

METHODS

Search strategy: Two English-language databases (PubMed, Embase) and four Chinese-language databases (China National Knowledge Infrastructure, VIP Database for Chinese Technical Periodicals, Wanfang, and Chinese Biomedical Literature Database) will be searched for KOA CPGs. The keywords included osteoarthritis, knee joint osteoarthritis, guideline, osteoarthritis of knee, etc. In addition to the systematic search, we will also search the official website of 40 orthopedic related societies and guideline development institutions.

Participant or population: No patient involved.

Intervention: Not applicable.

Comparator: Not applicable.

Study designs to be included: This study divides eligible CPGs into two types: Comprehensive CPG (for multiple types of arthritis, including knee osteoarthritis) and

KOA-specific CPG (all recommendations are specific for knee osteoarthritis).

Eligibility criteria: CPGs or recommendations for KOA published after 2017 will eligible. We will exclude guidelines for repeated publication, old versions, and methodological guidance for developing guidelines.

Information sources: Two English-language databases (PubMed, Embase) and four Chinese-language databases (China National Knowledge Infrastructure, VIP Database for Chinese Technical Periodicals, Wanfang, and Chinese Biomedical Literature Database).

Main outcome(s): We will include the following parts: search results, characteristics of included clinical practice guidelines, factors determines the direction and strength of the recommendations considered by the included clinical practice guidelines, association between certainty of evidence and recommendations, interpretation of the recommendations.

Additional outcome(s): Comparison between knee osteoarthritis clinical practice guidelines.

Data management: EndNote (V.X9.0) was used for the management of the records. A structured data extraction table in Excel spreadsheet was designed and tested before use. Two types of information from each CPG were extracted: (1) basic information of the CPGs, including source of guidelines, scope, type of KOA and whether the GRADE approaches were adopted, (2) relevant information on the formation of recommendations, including the consideration factors in the formation of recommendation, the relevance between certainty of evidence and strength of recommendation, and interpretations of the recommendations which provides additional clarification. Reviewers work in pairs to independently screen all titles, abstracts, and full texts and extract data. Disagreements were solved by discussion or consult a third author (FY).

Quality assessment / Risk of bias analysis: Not applicable.

Strategy of data synthesis: We used descriptive statistics and calculated the proportion of relevant items. For guidelines used criteria other than the GRADE approaches to access the certainty of evidence, we consider the highest level as high certainty, the second high level as moderate certainty, the third high level as low certainty, and the other levels as very low certainty. For guidelines used criteria other than the GRADE approaches to present the strength of recommendations, we consider that the explicit expression of recommendation strength is strong, or 0-10cm VAS in order to assess the strength of recommendation greater than 9, or the highest recommendation strength based on multiple levels evidence as strong recommend or strong against according to their directions, the others were conditional recommend or against.

Subgroup analysis: Not applicable.

Sensitivity analysis: Not applicable.

Language restriction: No.

Country(ies) involved: China.

Keywords: Clinical practice guidelines; Evidence to recommendation; Discordant recommendation; Inappropriate recommendation.

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