INPLASY PROTOCOL

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Corresponding author:
Junyu Xi

1916383740@qq.com

Author Affiliation:
Institute of Clinical Basic Medicine of Chinese Medicine, China Academy of Chinese Medical Sciences.

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None declared.

Effect of compound Donkey-hide gelatin on anemia: A systematic review and meta-analysis of randomized controlled trials

Xi, JY[1]; Cui, X[2]; Zhao, XX[3]; Zhang, C[4]; Xie, YM[5].

Review question / Objective: **The purpose of this study was to evaluate the efficacy of compound donkey-gelatin combined with conventional methods in the treatment of various anemiaThe purpose of this randomized controlled trial meta-analysis was to evaluate the efficacy of compound gelatin in the treatment of anemia, and provide a summarized evidence for clinical practice and decision making.**
Condition being studied: **Anemia is a common blood system disease in clinic, involving a variety of clinical.The clinical incidence of diseases is increasing year by year. According to WHO rules about 3 billion people worldwide suffer from anemia to some degree each year due to poverty.Tens of millions of people have died from various diseases caused by blood. Among people with anemia, female.The incidence of sex was significantly higher than that of male, and the incidence of elderly and children was significantly higher than that of young and middle-aged people. Anemia refers to the unit volume of blood circulating around the body, hemoglobin.And the red blood cell count is lower than the lower limit of normal levels. Life with anemia quality has been severely traumatized, so it should be treated more intensively.Therefore, we decided to systematically evaluate the efficacy of compound donkey-gelatin for anemia.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 March 2022 and was last updated on 23 March 2022 (registration number INPLASY202230119).

INTRODUCTION

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METHODS

Participant or population: All types of anemia as well as those from the original disease were included and were not excluded on the basis of race or age.

Intervention: Compound donkey-hide gelatin is the main intervention measure.

Comparator: The control measures were mainly conventional treatments that had been proved to be effective and did not contain compound gelatin.

Study designs to be included: Randomized controlled trials (RCTs) will be included.

Eligibility criteria: Type of study: randomized controlled trial, language and publication independent. Subjects: Met the diagnostic criteria for anemia. Intervention measures: the experimental group was compound donkey-hide gelatin, or the control group was added compound donkey-hide gelatin; The control group received conventional western medicine treatment (ferrous succinate tablets, folic acid, iron sucrose injection, vitamin B12, ferrous glucose sulfate), or other western medicine treatment on the basis of conventional treatment, and did not contain compound gelatin, dosage and course of medication is not limited.

Information sources: Data of eight electronic data (CNKI database, Wanfang Database, VIP Database, CBM database; Foreign language databases: PubMed, Cochrane Library, EMbase, Web of Science) before April 2022 were retrieved.

Main outcome(s): Continuous variable: hemoglobin (HB). The effect size is MD.

Quality assessment / Risk of bias analysis: Cochrane "risk bias assessment" tool was used to evaluate the quality of the included literature, mainly by randomized method. Allocation hidden; Blind implementation of subjects; Blind implementation of researchers; Blind implementation of results evaluators; Data integrity; Selective reports and other bias (such as baseline comparability) were evaluated, and the included literature was ultimately judged as "low risk of bias" or "high risk of bias" or "uncertain risk of bias".

Strategy of data synthesis: RevMan 5.3 statistical software provided by the Cochrane Collaboration was used for data analysis. Mean Difference (MD) (measurement data) and Relative Risk (RR) (dichotomous variables) were selected as the effect size, and 95% Confidence Interval (CI) was used to represent the Interval estimation. When the homogeneity among the studies was small ($P \geq 0.1$, $I2 \leq 50\%$), the fixed-effect model was selected for analysis. When the heterogeneity among studies was large, the causes were analyzed; if the heterogeneity was caused by clinical factors or research methods, subgroup analysis or sensitivity analysis was conducted; if the heterogeneity was still large after analysis ($P < 0.1$, $I2 > 50\%$), random effect model was selected for analysis. If the study was not

suitable for meta-analysis, descriptive analysis was performed.

Subgroup analysis: Subgroup analysis was performed based on the primary disease.

Sensitivity analysis: When possible, we will conduct sensitivity analysis to ensure the stability and reliability of the conclusions drawn from the meta-analysis. Low quality experimental studies will be excluded, and if the synthetic results show high heterogeneity (the 12test is >75%), it is necessary to consider re-evaluation to determine stability and reliability.If there is no significant change in the result of synthesis, we could consider that the synthesis are reliable.

Country(ies) involved: China.

Keywords: Compound donkey-hide gelatin; Anemia; Randomized controlled trial; System evaluation; Meta analysis; Sequential analysis of tests.

Contributions of each author:
Author 1 - Junyu Xi.
Author 2 - Xin Cui.
Author 3 - Xiaoxiao Zhao.
Author 4 - Cheng Zhang.
Author 5 - Yanming Xie.