INPLASY PROTOCOL

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Review Stage at time of this submission: Data analysis.

Conflicts of interest: None declared.

A meta-analysis of the efficacy of photodynamic therapy for oral candidiasis

Hu, Q[1]; Liu, N[2].

Review question / Objective: This study evaluated the clinical efficacy of photodynamic therapy for oral candidiasis infection through meta-analysis to provide evidence-based medical evidence for the treatment of oral candidiasis. P: Patients diagnosed with oral candidiasis. I: PDT of any type of light source and photosensitizer. C: Use of topical or systemic antifungal drugs. O: Degree of reduction in the number of oral Candida colonies or resolution of oral mucosal inflammation (Candida fungal count, cure rate, effective rate) in the patient's. S: Randomized controlled trial.

Condition being studied: Oral candidiasis is the most common fungal infectious disease of the oral mucosa caused by Candida, and patients with oral candidiasis are often accompanied by burning, unpleasant bitter or salty tastes, altered sense of taste, and sometimes pain and discomfort, dysphagia, nausea, vomiting, and diarrhea. These symptoms may disrupt eating and lead to changes in the patient's quality of life. In recent years, with the widespread use of broad-spectrum antibiotics and immunosuppressants, the number of immunocompromised patients has increased, and the incidence of oral candidiasis has increased, and it can lead to life-threatening systemic infections.

INTRODUCTION

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METHODS

Search strategy: Computer search China Academic Journals Full-text Database (CNKI), China Biomedical Literature Database (CBM), Chinese Science and Technology Journals Database (VIP), Wan fang Database, PubMed, Web of Science, Cochrane Library, Embase, Scopus.
Terms include:

P: Candida OR Candidiasis OR Candidiases OR Candidiasis, Oral OR Candidiases, Oral OR Oral Candidiases OR Oral Candidiasis OR Thrush OR Moniliasis, Oral OR Moniliases, Oral OR Oral Moniliases OR Oral Moniliasis OR Stomatitis, Denture OR Denture Stomatitides OR Denture Stomatitis OR Stomatitides, Denture OR AIDS-related oral candidiasis

I: Photochemotherapy OR Photochemotherapies OR Photodynamic Therapy OR Therapy, Photodynamic OR Photodynamic Therapies OR Therapies, Photodynamic OR Antibacterial photodynamic therapy OR Photodynamic antimicrobial chemotherapy OR Photodynamic inactivation OR PDT OR APDT OR PAD OR PDI

S: randomized controlled trial OR randomized OR placebo.

Participant or population: Patients with oral candidiasis.

Intervention: Photodynamic therapy.

Comparator: Antifungal therapy.

Study designs to be included: RCT.

Eligibility criteria: Inclusion Criteria: Based on PICOS Principles P: Patients diagnosed with oral candidiasis I: Photodynamic therapy with any type of light source and photosensitizer C: Use of topical or systemic antifungal drugs O: Reduction in the number of oral Candida colonies or resolution of oral mucosal inflammation (Candida fungal count, cure rate, response rate) S: Randomized control Exclusion Criteria: References in languages other than English and Chinese, duplicates, and studies for which primary data were not available.

Information sources: The literature comes from China Academic Journals Full-text Database (CNKI), China Biomedical Literature Database (CBM), Chinese Science and Technology Journals Database (VIP), Wan fang Database, PubMed, Web of Science, Cochrane Library, Embase, Scopus.

Main outcome(s): The primary outcome variable was treatment efficacy for oral candidiasis, with outcome measures including Candida fungal count, cure rate, and response rate.

Quality assessment / Risk of bias analysis: To assess the risk of bias in the study methodology, the Cochrane Hand-book for Systematic Reviews of Intervention guide for randomized clinical trials was used. Each study was assessed for allocation confidentiality, the possibility of randomization, masking, incomplete result data, and other sources of bias.

Strategy of data synthesis: In this study, Candida colony formation units (CFUs) were continuous variables, and the effect size was expressed using the mean difference MD and 95% confidence interval. Cure rate and response rate were dichotomous variables, with RR values and 95% confidence intervals indicating effect size. Q test and I2 test were performed, and if there was no heterogeneity between the results of the studies, a fixed-effect model was used for analysis; If there was heterogeneity between study results, a random-effects model was used.

Subgroup analysis: Subgroup division was carried out according to control measures, subgroup 1: nystatin, subgroup 2: fluconazole, subgroup 3: miconazole, subgroup 4: nystatin in combination therapy with photodynamic.

Sensitivity analysis: After deleting any of the document data, whether the combined results of the remaining document data are large from the original.

Country(ies) involved: China.

Keywords: oral candidiasis, candida, photodynamic therapy, photo-chemotherapy, PDT, antifungal drugs, Meta-analysis.

Contributions of each author:
Author 1 - Hu Qiaoyu.
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