INPLASY PROTOCOL

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Support: **No.**

Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
None.

Effects of fluorescent light cystoscopy in non-muscle-invasive bladder: a systematic review and meta-analysis

Liu, B[1]; Sun, J[2]; Ma, X[3].

Review question / Objective: **Fluorescent light cystoscopy is a kind of cystoscopy performed under fluorescent light to find the highlighting bladder cells that taken up the photodynamic agent.The purpose of this research is to systematically review the effect of fluorescent versus white light cystoscopy on bladder cancer clinical outcomes.**
Condition being studied: **Previous studies showed fluorescent light cystoscopy had higher sensitivity than white light cystoscopy (Mowatt et al.,2011). However ,how patients benefited from fluorescent light cystoscopy still had some arguments.**
Information sources: **The following electronic databases will be searched: PubMed, EMBASE, Cochrane Library, CBM, and CNKI databases.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 April 2020 and was last updated on 26 April 2020 (registration number INPLASY202040178).

INTRODUCTION

Review question / Objective: **Fluorescent light cystoscopy is a kind of cystoscopy performed under fluorescent light to find the highlighting bladder cells that taken up the photodynamic agent.The purpose of this research is to systematically review the effect of fluorescent versus white light cystoscopy on bladder cancer clinical outcomes.**

Condition being studied: **Previous studies showed fluorescent light cystoscopy had higher sensitivity than white light cystoscopy (Mowatt et al.,2011). However , how patients benefited from fluorescent light cystoscopy still had some arguments.**

METHODS

Search strategy: The following electronic databases will be searched: PubMed, EMBASE, Cochrane Library, CBM, and CNKI databases. We developed a search strategy using a combination of keywords and medical subject headings (MeSH)/ EMTREE terms, and the following expressions will be used: (bladder cancer or bladder neoplasm or bladder carcinoma or bladder tumor or bladder tumour or bladder or urothel*) and (PDD or Hexvix or fluorescen* or 5-ALA or HAL or photodyn*) and (randomized controlled trail or clinical trail). The search was limited to human studies and had no language restrictions.

Participant or population: Patients who had suspected or proven NMIBC.

Intervention: Fluorescent cystoscopy.

Comparator: White light cystoscopy.

Study designs to be included: RCTs.

Eligibility criteria: The study protocol will be developed and executed in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses statement. All of the following inclusion criteria in the PICOS order will be met by the studies included in our meta-analysis: (1) patients who had suspected or proven NMIBC; (2) intervention: Fluorescent cystoscopy group; (3) comparison intervention: white light cystoscopy group; (4) outcome measures: at least one of the following outcome measures should to be reported: recurrence, progression, recurrence-free survival, or carcinoma in situ (CIS) detection rate; and (5) study design: RCTs. Articles with no assessment of the outcomes mentioned above or no comparison of 2 groups will not be included in this meta-analysis. Duplicate reports and conference abstracts will be excluded. Retrospective trials, case reports, biochemical trials, letters, and reviews will also be eliminated. Two independent authors will screen the titles and abstracts of the potentially relevant studies to determine their eligibility based on the criteria. Disagreements will be resolved through a discussion with a third review author.

Information sources: The following electronic databases will be searched: PubMed, EMBASE, Cochrane Library, CBM, and CNKI databases.

Main outcome(s): Recurrence rate of bladder cancer.

Additional outcome(s): Progression rate, recurrence-free survival, and carcinoma in situ (CIS) detection rate.

Quality assessment / Risk of bias analysis: Two reviewers independently assessed the quality of the included studies using a version of the QUOROM guidelines.

Strategy of data synthesis: According to the basic characteristics of the included studies, the Meta analysis will be performed using Review Manager 5.3. Given the characteristics of the extracted data in the review, continuous outcomes will be expressed as the mean differences with 95% confidence intervals (CIs). Differences in categorical variables will be expressed as risk ratio values and 95% CIs. Heterogeneity will be assessed by means of I2 statistics. I2 ≥50% represent high heterogeneity.

Subgroup analysis: We will perform subgroup analysis based on the administration of photosensitizer(5-ALA or HLA) and the grade of bladder tumor.

Sensibility analysis: Sensitivity analyses will be undertaken to determine the potential source of heterogeneity when significant.

Country(ies) involved: China.

Keywords: bladder cancer/tumour/ carcinoma , fluorescent cystoscopy , 5-aminolevulinic acid , hexylaminolevulinate.