INPLASY PROTOCOL

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Support: Personal.

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

Conflicts of interest: None declared.

Beta-blockers in colorectal cancer: a systematic review and meta-analysis

Wang, J[1]; Zhou, X[2]; Fu, W[3].

Review question / Objective: The aim of this meta-analysis to assess the impact of beta-blockers on the outcomes of patients with colorectal cancer.

Condition being studied: Preclinical and retrospective studies suggest that beta-blockers are active against colorectal cancer. We carried out a systematic review and meta-analysis to assess the impact of beta-blockers on the outcomes of patients with colorectal cancer.

Eligibility criteria: Eligible studies had to meet the following criteria: had published, presented, or otherwise publically available data; reported patient outcomes for at least one of the endpoints (OS, DFS, PFS, cancer specific mortality) of this meta-analysis according to beta-blocker use (yes versus no); included patients with colorectal cancer (whatever stage it is).

INTRODUCTION

Review question / Objective: The aim of this meta-analysis to assess the impact of beta-blockers on the outcomes of patients with colorectal cancer.

Rationale: The present study is a quantitative synthesis and metaanalysis based on published or publically available data from studies that reported outcomes of patients with colorectal cancer according to beta-blocker use (yes versus no).

Condition being studied: Preclinical and retrospective studies suggest that beta-blockers are active against colorectal

cancer. We carried out a systematic review and meta-analysis to assess the impact of beta-blockers on the outcomes of patients with colorectal cancer.

METHODS

Search strategy: We will search, with no time restrictions, the following databases for relevant English language literature: PubMed , the Cochrane Central Register of Controlled Trials and Web of Science. The search string will be built as follows: (betablocker) AND (colorectal cancer) AND (survival). The electronic database search will be supplemented by a manual search of the reference lists of included articles.

Participant or population: Adults with colorectal cancer.

Intervention: Beta-blocker was the main intervention.

Comparator: Colorectal cancer patients who did not use beta-blocker.

Study designs to be included: A systematic literature search was performed to identify studies comparing outcomes of patients with colorectal cancer according to beta-blocker use (yes versus no).

Eligibility criteria: Eligible studies had to meet the following criteria: had published, presented, or otherwise publically available data; reported patient outcomes for at least one of the endpoints (OS, DFS, PFS, cancer specific mortality) of this meta-analysis according to beta-blocker use (yes versus no); included patients with colorectal cancer (whatever stage it is).

Information sources: We will search, with no time restrictions, the following databases for relevant English language literature: PubMed , the Cochrane Central Register of Controlled Trials and Web of Science.The electronic database search will be supplemented by a manual search of the reference lists of included articles

Main outcome(s): The primary endpoint was cancer specific mortality, defined as the occurrence of a colorectal cancer death.

Additional outcome(s): Secondary objectives were to assess colorectal cancer recurrence, recurrence-free survival (RFS) and overall survival (OS) according to beta-blocker use.

Quality assessment / Risk of bias analysis: The Newcastle-Ottawa Scale was employed to assess the quality of the data obtained and the risk of bias in each study.

Strategy of data synthesis: For the primary objective and its respective subgroup analyses, and for the secondary objectives OS and breast cancer-specific mortality, hazard ratios (HRs) were extracted from each study for the comparison between patients who received beta-blockers versus those who did not.

Subgroup analysis: Subgroup analyses were planned to assess cancer specific mortality according to beta-blocker use per colorectal cancer stage [I、II、III、IV] and beta-blocker class (non-selective and ß1-selective).

Sensitivity analysis: Sensitivity analysis were conducted by interactively recalculating the pooled HR estimates after exclusion of each single study.

Country(ies) involved: China.

Keywords: beta-blocker, colorectal cancer, survival, cancer specific mortality.

Contributions of each author:
Author 1 - Wang Junwei.
Author 2 - Zhou Xin.
Author 3 - Fu Wei.