INPLASY PROTOCOL

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None declared.

Risk factors for gallbladder Cancer: A meta-analysis based on nearly a decade of research

Li, Z[1]; Zhang, G[2]; Liu, J[3]; Li, X[4].

Review question / Objective: Gallbladder cancer is a rare tumor that is mostly advanced once detected. The efficacy of surgical treatment is still controversial. Therefore, primary prevention of gallbladder cancer is important. There are many studies on risk factors for gallbladder cancer, but at present it is difficult to identify independent risk factors for gallbladder cancer, except for a history of symptomatic chronic cholecystitis and malignant transformation of a single polyp. Laparoscopic cholecystectomy is popular worldwide and can be a preventive procedure for gallbladder cancer in addition to resolving benign lesions. This study makes a meta-analysis of the latest research results exploring the risk factors of gallbladder cancer in the last decade , expecting to provide evidence-based medical support for the prevention of gallbladder cancer at the clinical level, and to provide some ideas to guide the surgical indications for LC and future research related to gallbladder cancer. Subject of study: Gallbladder cancer. Study content: Risk factors. Type of study: case-control or cohort study. Extract the value: OR, HR, RR.

INTRODUCTION

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Condition being studied: Gallbladder Cancer.

METHODS

Search strategy: 1. Subject word: Gallbladder tumor
Free word: gallbladder cancer, gallbladder cancer, gallbladder cancerous lesions and so on.
2. Subject word: risk factors
Free word: influencing factors, etiology, associated factors and so on.
3. Subject word: Case-Control Studies and Cohort study
Free word: case-control1.

Participant or population: Cohort Study：
The Crowd;Case-Control Study：Patients without gallbladder cancer and patients with gallbladder cancer.

Intervention: None.

Comparator: Cohort Study: Cohort Studies：none；Case-Control Study: Patients who do not have gallbladder cancer.

Study designs to be included: Cohort Study and Case-Control Study.

Eligibility criteria: Inclusion criteria: (1) Study types: published case-control studies and cohort studies investigating risk factors for gallbladder cancer, including prospective cohorts or retrospective cohorts; (2) Study subjects: case-control studies should be controlled by patients with clinicopathologically confirmed gallbladder cancer and comparable healthy patients or patients with benign lesions only during the same period; cohort studies should be based on a large sample. The cohort study should be based on a large sample, and the HR values should be derived from the COX regression model; (3) the cohorts selected for the cohort study could be the same population, but different risk factors should be explored; (4) the study results should be able to extract the OR, HR or RR values, and the description of the results in the text should be consistent with the information provided in the specification table, and the RR and HR values should be derived from the COX regression model, and the OR values should be extracted from the unconditional multi-factor logisitic regression model The OR values are extracted from the unconditional multi-factor logistic regression model.Exclusion criteria (1) study type not accounted for; (2) unable to extract valid data; (3) duplicate publications; (4) difficulty in obtaining full text; (5) non-English or Chinese literature; (6) studies without control groups, incomplete basic data, and too many missed visits; (7) risk factors defined significantly different from most study criteria; (8) systematic reviews or review articles; (9) risk factors studied in each study type (9) The number of risk factors studied in each study type should be ≥2, and the literature that includes a single article discussing a risk factor will be deleted.

Information sources: Pubmed, Embase, Cochrane, CNKI, WanFang, Vip, CBM, Web of science.

Main outcome(s): OR, HR.

Additional outcome(s): None.

Data management: EndNote.

Quality assessment / Risk of bias analysis: NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE.

Strategy of data synthesis: 1. ORs of at least two case-control studies exploring the same risk factor were combined using RevMan 5.3 software, and HRs of at least two cohort studies exploring the same risk factor were combined using Stata 14.0 software 2. Heterogeneity testing The case-control studies were combined using RevMan 5.3 without sensitivity analysis or publication bias testing, but a rigorous meta-analysis process was required for the interpretation of forest plot heterogeneity in the cohort studies using Stata 14.0 software. No heterogeneity studies are required to meet both I2 < 50% and Q-test p > 0.1, if only one of them is met, sensitivity analysis is made using stata14.0, and if both are met, the effect size analysis is combined to select the fixed effect model, and vice versa, sensitivity analysis is used first to find the cause, and the corresponding solution measures are found to be successful and fixed effect model is used, and random effect model is applied if it cannot be model for analysis and discussion. 3. For the detection of publication bias in cohort studies, potential publication bias, in addition to visual detection by funnel plot also need to use stata14.0 software for Begg's test, if there is bias need to use the cut-and-patch method for analysis and discussion.

Subgroup analysis: Subgroups according to patients' ethnicity、 economic conditions and so on.

Sensitivity analysis: After deleting any one of them, the combined results of the remaining papers are not significantly different from those without deletion, which means that the sensitivity analysis is passed.

Country(ies) involved: China.

Keywords: Gallbladder cancer; risk factors; meta-analysis.

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Author 3 - Liu Jia.
Author 4 - Li Xiaolin.