INPLASY

Transarterial chemoembolization with I125 seeds insertion for unresectable hepatocellular carcinoma: a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 9 November 2024 and was last updated on 9 November 2024.

INTRODUCTION

Review question / Objective The aim of the study was to evaluate the outcome of TACE plus iodine-125 seed in comparison with TACE alone for hepatocellular carcinoma (HCC).

Condition being studied Hepatocellular carcinoma (HCC) is the most common malignancy in liver. Transarterial chemoembolization (TACE) is recommended as an effective treatment in advanced HCC patients. Recent studies showed iodine-125 seed (a low-energy radionuclide) can provide long-term local control and increase survival for HCC patients.

METHODS

Search strategy (((iodine-125) OR (I125)) AND ((Transarterial chemoembolization) OR (TACE))) AND ((hepatocellular carcinoma) OR (HCC)).

Participant or population Patients with inoperable HCC.

Intervention TACE+iodine-125.

Comparator TACE alone.

Study designs to be included Comparative studies.

Eligibility criteria Publications complied with the following criteria were accepted: 1) HCC diagnosed by computed tomography (CT), magnetic resonance imaging (MRI) or pathology; 2) prospective randomized controlled trials (RCTs) or non-randomized controlled trials (non-RCTs); 3) published trials that included a treatment group receiving TACE plus iodine-125 seed implantation and a control group receiving TACE alone; and 4) reported survival rate or tumor response rate on at least 1-year follow-up, while the criteria for tumor response must be described clearly. Abstracts, letters, case reports, and studies without control groups were excluded. In treatment centers with multiple publications, the most recent and/or largest publication was included.

Information sources PubMed, Wanfang, Cochrane Library.

Main outcome(s) Objective response rate.

Data management RevMan 5.3.

Quality assessment / Risk of bias analysis The Cochrane risk-of-bias tool was used to establish the quality of randomized controlled trials (RCTs), with each of the following being assigned a low, high, or unclear risk of bias: performance, attrition, detection, selection, reporting, and other bias.

Strategy of data synthesis For dichotomous variables, pooled odds ratios (ORs) with 95% confidence intervals (CIs) were calculated, while continuous variables were compared using mean differences (MD) values with 95% CIs. The I2 statistic and Q test were used to assess heterogeneity, with an I2 > 50% being considered indicative of significant heterogeneity. When heterogeneity was significant, random-effects models were used, whereas fixed-effect models were otherwise used. Sensitivity analyses were conducted via a “leave one out” approach in an effort to detect sources of heterogeneity.

Subgroup analysis None.

Sensitivity analysis Yes.

Country(ies) involved China.

Keywords HCC, TACE, I-125.

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