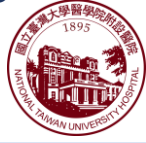


Comparing the prognosis of patients with hepatocellular carcinoma undergoing DEB-TACE treatment, with or without the addition of lipiodol.



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Introduction

Conventional transarterial chemoembolization (cTACE) has a long-standing history as a therapeutic approach for patients in the intermediate stage according to the Barcelona Clinic Liver Cancer (BCLC) staging system. Lipiodol serves as a drug carrier, but it can potentially lead to a shorter duration of therapeutic effects on the tumor and release of the injected drug into systemic circulation. The development of DEB-TACE aims to achieve more optimal therapeutic outcomes and safety. However, recent meta-analyses have indicated that there is no significant difference in survival rates between c-TACE and DEB-TACE. The possible reason is that the beads cannot embolize the tumor drainage, resulting in reversed flow from the surrounding hepatic sinusoids and portal veins into the peripheral tumor portion following arterial blockage. This may contribute to survival of the tumor at the periphery. In contrast, lipiodol can enter the portal veins through the drainage route of the tumor or peribiliary vascular plexus flow, and temporarily block the peritumoral portal blood flow. So, we aim to explore whether combining the advantages of lipiodol and beads can improve the prognosis of patients with hepatocellular carcinoma.

Methods

Patients with HCC who received first DEB-TACE between January 2020 to December 2022 at National Taiwan University were retrospectively analyzed (n = 66). Overall survival was calculated from the date of the first procedure to the date of death or final follow-up. The treatment response was assessed based on the mRECIST criteria using the first CT scan or MRI after the procedure.

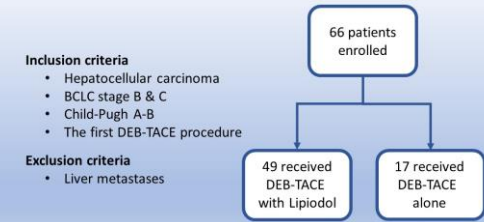


Figure 1. Flow chart of patient enrollment

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Results

A total of 66 patients diagnosed with hepatocellular carcinoma underwent their initial DEB-TACE procedure. None of them had undergone conventional TACE prior to this intervention. Among them, 49 patients received DEB-TACE with Lipiodol, while 17 patients received DEB-TACE alone. The median survival for the DEB-TACE with Lipiodol group was 13 months, compared to 11 months for the DEB-TACE group. However, no significant difference in overall survival was observed between the two groups ($p = 0.7703$). Additionally, there was no significant distinction in disease control rates during the initial follow-up between the DEB-TACE with Lipiodol group and the DEB-TACE group ($p = 0.553$).

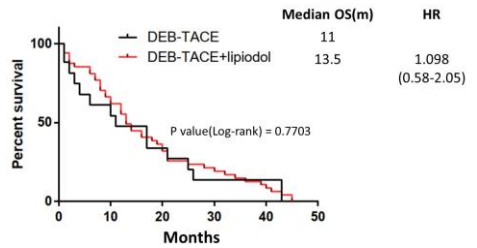


Figure 2. Kaplan-Meier survival analysis

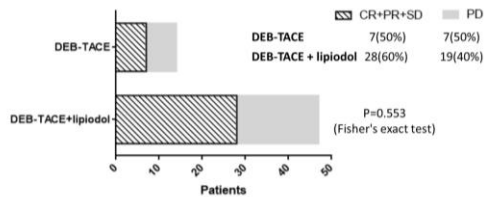


Figure 3. Comparison of disease control rate (DCR) in patients who received drug-eluting bead trans-arterial chemoembolization (DEB-TACE) with and without the addition of lipiodol.

Conclusion

This retrospective analysis indicates comparable overall survival rates in patients underwent DEB-TACE, regardless of the addition of lipiodol. There is insufficient evidence to support the benefits of DEB-TACE with the addition of Lipiodol.

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