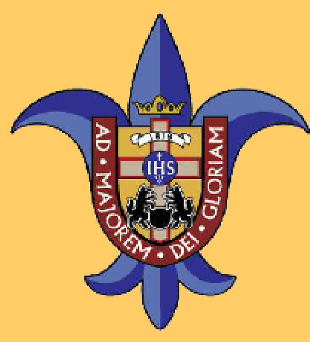
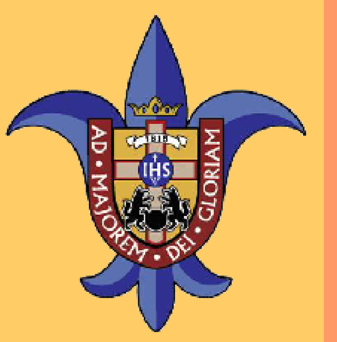


Local combination therapy with chemoembolization and microwave ablation in patients with Hepatocellular Carcinoma – a single center experience



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INTRODUCTION

- Chemoembolization (DEB-TACE) and microwave ablation (MWA) are established therapies for early and intermediate stage hepatocellular carcinoma (HCC)
- DEB-TACE is used as palliative therapy or as a bridge to transplant for intermediate stage HCC. MWA is used as curative therapy in early stage HCC. Independently, both therapies have limitations.
- Embolization with DEB-TACE up-regulates vascular endothelial growth factor (VEGF) leading to higher chances of recurrence at treated and distant sites.

BACKGROUND

- MWA alone cannot be used in large tumors due to heat dissipation and high rates of recurrence adjacent to blood vessels secondary to "heat sink" effect.
- When DEB-TACE is done before MWA, blood flow in and adjacent to the tumor is occluded, reducing heat. This allows for larger and homogenous ablation zone, markedly reducing the heat sink effect.
- While success of synergistic effect of DEB-TACE and radiofrequency ablation (RFA) is well studied and reported, limited data exists regarding combination therapy using MWA.

METHODS

- A retrospective chart review was performed.
- Patients with imaging evidence of HCC treated with DEB-TACE (performed with particles loaded with doxorubicin) followed by MWA the following day, based on multidisciplinary consensus, were identified.
- Tumor markers, imaging features and liver function were evaluated before procedure and on first follow-up at 6 weeks.
- Imaging response evaluation was done using the Modified RECIST criteria (m RECIST).
- Descriptive statistical methods were utilized.
- Quantitative variables were expressed as a median and range and categorical as count and proportions.

Baseline Clinical Characteristics (N=14)	
Age (years), median	66 (55-75)
Gender (male)	13 (92.9 %)
Cirrhosis	12 (85.7%)
Etiological Factors	
-HCV	9 (64.3%)
-NASH	3 (21.4%)
Child Pugh Score	
-A	8 (57.1%)
-B	5 (35.7%)
MELD Score, median	11 (6-27)
T. Bili, median (mg/dl)	1.2 (0.6-3.4)
AFP, median (IU/ml)	5.2 (0-400)
MRECIST, median	3.7 (1.7-6.5)

RESULTS

- A total of fourteen patients with Barcelona Clinic Liver Cancer Stage A & B were treated with combination therapy of DEB-TACE and MWA.
- MELD scores ranged from 6 to 27 and Child Pugh scores ranged from A6 to B7.
- Results revealed a complete response in 50% (n=7), partial response in 19% (n=3), stable disease in 15% (n=2) and progressive disease in 15% (n=2).
- Response evaluation was based on m RECIST criteria.
- No immediate post procedural complications requiring hospitalization were noted.

CONCLUSIONS

- Our results demonstrate a "proof-of-concept" of safety and short term efficacy of combination therapy with DEB-TACE followed by MWA in local therapy for early and intermediate stage hepatocellular carcinoma.
- This treatment modality is safe with excellent imaging response (a surrogate marker for survival) on short term follow up.
- Further long term results from our study are awaited.

REFERENCES

- Ni et al.Prognostic factors for survival after transarterial chemoembolization combined with microwave ablation for hepatocellular carcinoma World J Gastroenterology 2014 December 14; 20(46): 17483-17490
- Ni et al.Meta-analysis of radiofrequency ablation in combination with transarterial chemoembolization for hepatocellular carcinoma World J Gastroenterology 2013 June 28; 19(24): 3872-3882
- Peng et al Radiofrequency Ablation With or Without Transcatheter Arterial Chemoembolization in the Treatment of Hepatocellular Carcinoma: A Prospective Randomized Trial J Clin Oncol 2013 February 1 31:426-432

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