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Hepatocellular carcinoma review: Current treatment, and evidence-based medicine

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Abstract

We read with great interest the recent article entitled "Hepatocellular carcinoma review: Current treatment, and evidence-based medicine" by Raza *et al*, published in *World Journal of Gastroenterology*. Authors evaluated treatments for early and advanced stage hepatocellular carcinoma based on an extensive review of the relevant literature. They reported that radiofrequency ablation is the most effective local ablative therapy. They concluded that RF ablation is equivalent to surgical resection in well selected patients with early stage hepatocellular carcinoma. In addition, we want to mention microwave ablation besides RF ablation.

Key words: Hepatocellular carcinoma; Microwave ablation; Radiofrequency ablation

Core tip: We read with great interest the recent article entitled "Hepatocellular carcinoma review: Current treatment, and evidence-based medicine" by Raza *et al*, published in *World Journal of Gastroenterology*. Authors evaluated treatments for early and advanced stage hepatocellular carcinoma based on an extensive review of the relevant literature. They reported that radiofrequency ablation is the most effective local ablative therapy. They concluded that radiofrequency ablation is equivalent to surgical resection in well selected patients with early stage hepatocellular carcinoma. In addition, we want to mention microwave ablation besides RF ablation.

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TO THE EDITOR

We read with great interest the recent article entitled" Hepatocellular carcinoma review: Current treatment, and evidence-based medicine" by Raza *et al*[1], published in *World Journal of Gastroenterology*. Authors evaluated treatments for early and advanced stage hepatocellular carcinoma (HCC) based on an extensive review of the relevant literature. Authors reported that radiofrequency ablation (RF) is the most effective local ablative therapy. They concluded that RF ablation is equivalent to surgical resection in well selected patients with early stage HCC. In addition, we want to mention microwave ablation besides RF ablation. Unfortunately RF ablation use is limited by difficulties in heating charred tissue and has poor success rates for tumors near blood vessels, which is called heat-sink effect. Such limitations to heating can lead to potentially inadequate ablation zone and a higher rate of local tumor progression compared with resection[2]. Microwave ablation can heat the tissue faster than RF, and heating occurs in a large volume around the applicator. It would produce higher intratumoral temperatures, larger ablation zones, less ablation time and less dependence on the electrically conductive tissue. Its energy delivery is less limited by the exponentially rising electrical impedance of tumor tissue. These advantages may make microwave ablation less affected by heat-sink[3]. The advantage of RF is still and it

has been considered the most common thermal ablation modality worldwide for early stage HCC. Shi *et al*[4] reported that for solitary HCC ≤ 3 cm, MWA is as effective as surgical resection. In another report it is concluded that both MWA and RFA are safe and effective ablative treatments for liver cancer. Additionally, MWA has the advantage of cost efficiency[5]. On the other hand it is reported that there were no significant differences in morbidity or survival based on the surgical approach; however, local recurrence rates were highest for percutaneously ablated tumors[6].

REFERENCES

1 **Raza A**, Sood GK. Hepatocellular carcinoma review: current treatment, and evidence-based medicine. *World J Gastroenterol* 2014; **20**: 4115-4127 [PMID: 24764650 DOI: 10.3748/wjg.v20.i15.4115]

2 **Forner A**, Llovet JM, Bruix J. Hepatocellular carcinoma. *Lancet* 2012; **379**: 1245-1255 [PMID: 22353262 DOI: 10.1016/S0140-6736(11)61347-0]

3 **Wright AS**, Sampson LA, Warner TF, Mahvi DM, Lee FT. Radiofrequency versus microwave ablation in a hepatic porcine model. *Radiology* 2005; **236**: 132-139 [PMID: 15987969 DOI: 10.1148/radiol.2361031249]

4 **Shi J**, Sun Q, Wang Y, Jing X, Ding J, Yuan Q, Ren C, Shan S, Wang Y, Du Z. Comparison of microwave ablation and surgical resection for treatment of hepatocellular carcinomas conforming to Milan criteria. *J Gastroenterol Hepatol* 2014; **29**: 1500-1507 [PMID: 24628534 DOI: 10.1111/jgh.12572]

5 **Zhang XG**, Zhang ZL, Hu SY, Wang YL. Ultrasound-guided ablative therapy for hepatic malignancies: a comparison of the therapeutic effects of microwave and radiofrequency ablation. *Acta Chir Belg* 2014; **114**: 40-45 [PMID: 24720137]

6 **Groeschl RT**, Pilgrim CH, Hanna EM, Simo KA, Swan RZ, Sindram D, Martinie JB, Iannitti DA, Bloomston M, Schmidt C, Khabiri H, Shirley LA, Martin RC, Tsai S, Turaga KK, Christians KK, Rilling WS, Gamblin TC. Microwave ablation for hepatic malignancies: a multiinstitutional analysis. *Ann Surg* 2014; **259**: 1195-1200 [PMID: 24096760 DOI: 10.1097/SLA.0000000000000234]

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