

Microwave Ablation for Liver Tumours: A Retrospective Study from Sri Lanka

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Hepatocellular carcinoma (HCC) and liver metastases are the most common liver malignancies, with HCC comprising 80–90% of primary liver cancers. Microwave ablation (MWA) offers several advantages over surgical interventions, including shorter hospital stays and quicker recovery. While MWA's efficacy is well-documented internationally, limited data exist regarding its clinical performance in the Sri Lankan context. This study aimed to evaluate the effectiveness of MWA in treating malignant liver tumours by assessing recurrence rates, residual tumours, and post-procedural complications in a Sri Lankan cohort. A retrospective review was conducted at the Radiology and Hepatobiliary Units of Teaching Hospital Peradeniya, Sri Lanka, including patients who underwent MWA for liver malignancies between 2022 and 2024. Clinical data, procedural outcomes, imaging findings, and complications were extracted from hospital records. Contrast-enhanced computed tomography (CECT) was used at 4 weeks, 6 months, and 1 year post-procedure to assess recurrence and residual disease. A total of 22 tumours were treated with MWA between 2022 and 2024. The median patient age was 68 years (range: 47–83). Indications included HCC in 81.1% (n=18) and metastatic tumours in 18.9% (n=4). Complete ablation was achieved in 81% (n=18), with residual tumour seen in 4.5% (n=1). Tumour recurrence occurred in 9.1% (n=2) on follow-up imaging. No major post-procedural complications were observed. These findings indicate that MWA is both safe and effective, with high success rates and minimal adverse outcomes. The results align with international data and support MWA as a reliable therapeutic option in resource-constrained settings like Sri Lanka.

Keywords: Microwave ablation, liver tumours, Sri Lanka, minimally invasive therapy, hepatocellular carcinoma