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Materials and Methods: A single-center retrospective analysis was conducted of 78 patients (M:F = 67:13) with mean age of 58.9 years \pm 14 months (SD) with 78 hepatocellular carcinoma within Milan criteria that were treated with percutaneous MWA as bridging therapy and subsequent orthotopic liver transplant between August 2014 and September 2018. The pathology reports of the explanted livers were reviewed to assess for residual disease. Residual disease was categorized as complete or incomplete necrosis. Patient demographics, tumor/procedural characteristics, and laboratory values were evaluated. Survival from time of ablation and time of transplant were recorded and compared between cohorts using log rank tests.

Results: Median time to liver transplant post-MWA was 10.9 months (7.4 - 14.1 months) (IQR). The mean tumor size was 2.45 cm \pm .76 cm (SD), (range = 0.9-4.6 cm). The median survival from ablation was 56.7 (IQR = 72.2–42.9 months), and the median survival from transplant was 44.7 months (IQR = 59.0–32.6 months). Complete necrosis in 61% of cases. There was no significant difference in survival for patients with complete ($P = 0.40$) versus incomplete necrosis ($P = 0.71$). There was no significant difference in survival from orthotopic liver transplant between patients with macroscopically ($P = 0.37$) or microscopically ($P = 0.68$) evident disease.

Conclusions: CT-guided percutaneous microwave ablation is effective in achieving complete necrosis for patients with hepatocellular carcinoma who are awaiting orthotopic liver transplant.

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Changes in interventional radiology case volumes during the COVID-19 pandemic

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Purpose: Our study goal was to investigate interventional radiology case volume trends during the COVID-19 pandemic at our large academic hospital compared to the affiliated imaging centers.

Materials and Methods: Our study was a descriptive retrospective study of interventional radiology (IR) imaging studies performed at our large urban academic hospital, affiliated outpatient center, and affiliated community center from January 5, 2020, to August 15, 2020. Imaging volume assessment was separated into prestate of emergency (SOE) period (before SOE in Massachusetts, (January 5, 2020, through March 7, 2020), “post-SOE” period (time after “nonessential” services closure, March 22, 2020, through May 16, 2020), “transition” period (between pre-SOE and post-SOE), and recovery period (time after Massachusetts permits resumption of non-emergency procedures or deferred cases, May 17, 2020, to August 15, 2020). Data was presented as mean with 95% confidence interval (CI). Statistical analysis was performed using Prism (GraphPad, San Diego, CA).

Results: IR imaging volume began to decrease on March 11, 2020, with a large decrease in imaging volume from 5,908 studies performed between weeks 1 to 9 to 1,927 between weeks 12 to 19. The average weekly volume decreased by 63% from weeks 1-9 (656 studies) to weeks 12-19 (241 studies; $P < 0.0001$). By site, during the pandemic, the weekly volume at the main hospital campus declined from 496 studies (weeks 1-9; 100% baseline) to 167 studies (weeks 12-19; 34% of baseline). At the affiliated outpatient center, weekly volume went from 38 studies (weeks 1-9; 100% baseline) to 43 studies (weeks 12-19; 113% of baseline). During the recovery, the main hospital campus has returned to 407 cases, 82% of baseline, $P = 0.002$, community cases are back to baseline of 123, 101% of baseline, $P = 0.93$, and outpatient weekly cases have increased to 49 (129% of baseline, $P < 0.001$). At the main campus, 75% of the difference in baseline was in fluoroscopy, the majority of which consists of 4 procedures, a 58% drop in fluoroscopic interventional oncology (TACE, Y90, selective internal radiation therapy planning), a 14% drop in AV fistula maintenance procedures, a 30% drop in suprapubic tubes maintenance and exchanges, and a 27% drop in port revisions and removals.

Conclusions: COVID-19 induced a steep decline in case volume in the hospital with an increase in outpatient cases. During the recovery, case volume has nearly recovered to pre-pandemic levels with a persistent increase in outpatient cases. The asymmetric drop in hospital-based cases compared to outpatient may be secondary to fears around COVID-19.

Multivariate Analysis on the Effect of Bleeding Disorder on Postoperative Outcomes Following Lower Extremity Endovascular Interventions for Peripheral Arterial Disease

Outcome	Odds Ratio	Lower Confidence Limit	Upper Confidence Limit	P Value
Mortality	1.8	1.27	2.53	0.001
Any complication	1.29	1.04	2.87	< 0.0001
Pulmonary complication	1.36	0.98	1.85	0.067
Renal failure	2.55	1.48	4.38	0.0001
Cardiac complication	1.5	1.01	2.07	0.014
CNS complication	2.17	0.99	4.42	0.06
Sepsis	1.28	0.93	1.75	0.13
UTI	2.57	1.46	4.54	0.0013
VTE	1.18	0.57	2.5	0.69
Readmission	1.02	0.89	1.17	0.75
Reoperation	1.15	0.99	1.34	0.68
Wound complication	0.94	0.69	1.28	0.75
Whole blood or pRBC transfusion	1.96	1.67	2.29	< 0.0001