

## Points

- RFA of the liver is a well-known procedure.
- It is used for both primary hepatomas as well as metastases.

## RFA of Liver Lesions

Radiofrequency ablation of the liver is a well-established procedure that is used to ablate primary and secondary liver tumors. Commonly, it is used in conjunction with other techniques for hepatomas and also in those with metastatic disease where resection is not an option.

As the case below shows, effective ablation of the lesion can usually be achieved, with the correct choice of imaging modality and instrumentation. In this case, the patient was a known case of colonic malignancy, for which he had been treated successfully in the past. He was recently operated for obstruction, at which time a new liver lesion was found in segment 5. To avoid one more surgery, an ablation was planned.

As seen in Figure 1, the lesion was close to the surface, near which was the ascending colon. First, dextrose was injected to separate the colon from the liver surface by

about 1.0 cm (Fig. 2), so that there would be no injury to the colon as dextrose is a poor conductor of heat. Following that, a staged ablation was performed (Fig. 3) using an SD-electrode (RITA systems) and the lesion was completely ablated. The post-ablation, arterial phase, contrast enhanced CT shows a hyperemic rim (Fig. 4) with complete absence of enhancement, which is suggestive of successful ablation.

PET/CT before and after ablation may also be used to confirm successful ablation, but this was not possible in our patient, due to logistical issues.

RFA of the liver has success rates that are variable depending on a variety of factors, including the type of tumor, size of the lesion, experience of the operator, type of instrumentation used and the location of the lesion.

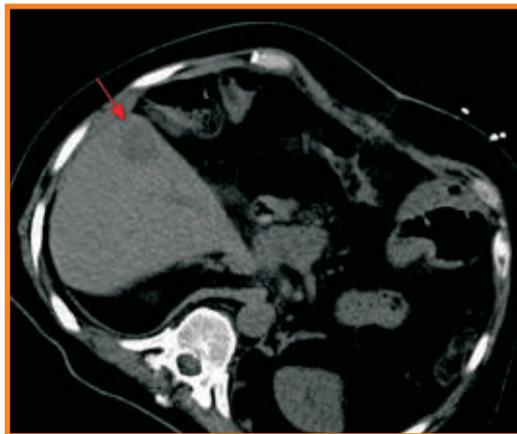


Fig. 1

Figure 1: Plain CT scan shows a metastatic lesion (arrow) in segment 5 of the right lobe of the liver.

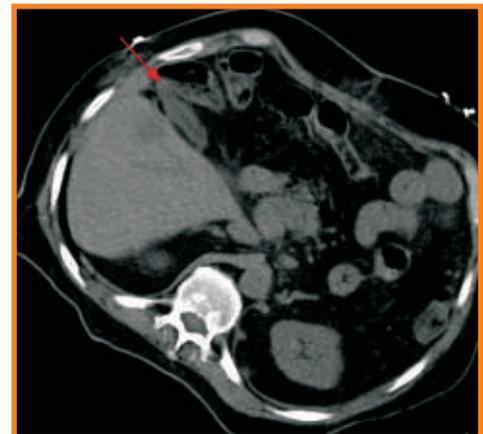


Fig. 2

Figure 2: Plain CT scan shows dextrose (arrow) injected between the colon and liver surface, thus pushing away the colon to minimize injury by the heat generated during the RFA.

The online version is up at <http://www.piramaldiagnosics.com/radiology/spaces-newsletter/current-issue.aspx>



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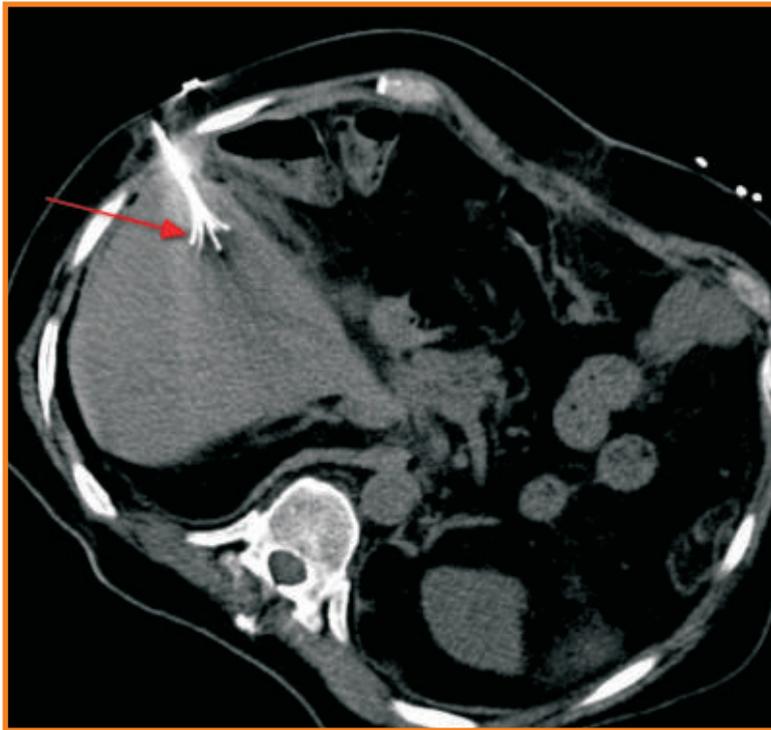


Fig. 3

Figure 3: Plain CT scan shows the electrode (arrow) deployed within the lesion.

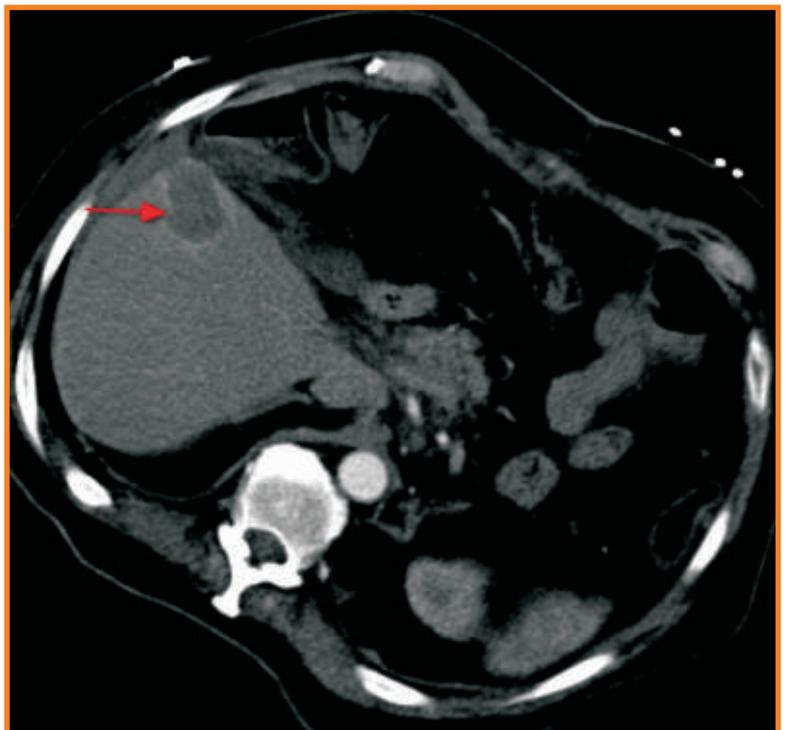


Fig. 4

Figure 4: Contrast-enhanced CT scan shows absence of enhancement within the lesion. Note the hyperemic enhancing rim (arrow), characteristic of post-ablation change and suggesting complete, successful ablation.

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