Imaging Spectrum Post Radiofrequency Ablation (RFA) of 200 Renal Tumours

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Purpose

This pictorial illustration aims to present our imaging experience in the assessment of 200 renal tumours post RFA at a tertiary university institution from 2004 to 2013.

Content Organization

We present a pictorial review of image guided renal RFA over an 8-year period. The contents include describing current techniques used to assess renal tumours following RFA and to illustrate the normal expected findings and sequential imaging interval changes longitudinally on both contrast enhanced CT and or MRI and to describe the classic imaging signs associated with the interval change. To highlight the pearls and pitfalls of imaging findings on both CT and MRI and to demonstrate the use of contrast enhanced ultrasound in problem solving cases. This review also present unusual findings post renal RFA e.g. incidental chyluria, latent infection in the zone of ablation with fistula formation to the pleural and inflammatory track between zone of ablation and adjacent structure e.g. colon, as well as, to illustrate our complications e.g. acute tubular necrosis, calyceal cutaneous fistula and retroperitoneal abscess from a complicated ureteric stricture post RFA.

Summary

This review aims to present the important imaging features post image guided renal RFA, and highlight potential pitfalls on radiology, in order to assist early recognition of residual/recurrent disease as well as complications which would allow timely clinical management.