Local recurrence after retropubic radical prostatectomy for prostate cancer does not exclusively occur at the anastomotic site.

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Abstract
WHAT'S KNOWN ON THE SUBJECT? AND WHAT DOES THE STUDY ADD?: Local recurrence after radical prostatectomy (RP) for clinically organ-confined prostate cancer is largely assumed to occur at the anastomotic site, as reflected in European and North American guidelines for adjuvant and salvage radiotherapy after RP. However, the exact site of local recurrence often remains undetermined. The present study shows that roughly one out of five patients with local recurrence after RP has histologically confirmed tumour deposits at the resection site of the vas deferens, clearly above the anastomotic site. This should be considered when offering 'blind' radiotherapy to the anastomotic site in patients with biochemical recurrence alone.

OBJECTIVE: To determine the anatomical pattern of local recurrence and the corresponding clinical and pathological variables of patients treated with retropubic radical prostatectomy (RRP).

PATIENTS AND METHODS: In all, 41 patients with biopsy confirmed local recurrence after extended pelvic lymph node dissection and RRP performed between January 1992 and December 2009 at a single tertiary referral academic centre were retrospectively studied. The site of local recurrence as assessed on computed tomography or magnetic resonance imaging was reviewed. Two sites were identified: the vesicourethral anastomotic site and the cranial resection margin of the surgical bed, where the vas deferens was transected and clipped. Age and serum prostate-specific antigen (PSA) level at RRP, pathological tumour and nodal stage, Gleason score, tumour location, surgical margin status, age and serum PSA level at the time of local recurrence, and time to diagnosis of local recurrence were assessed for the two sites and compared with the chi-square or Wilcoxon rank sum tests as appropriate.

RESULTS: Local recurrence occurred at the anastomotic site in 31/41 (76%) patients and at the resection site of the vas deferens in nine of 41 (22%) patients. One patient had distinct lesions at both sites. There was no significant difference in any of the clinical and pathological variables between patients with local recurrence in the former and latter site.

CONCLUSION: Most local recurrences after RRP occur exclusively at the anastomotic site. However, 22% of locally recurrent cases had tumour at the resection site of the vas deferens. This should be taken into account when considering adjuvant or salvage radiation therapy.

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