Long-term oncological outcomes of apical positive surgical margins at radical prostatectomy in the Shared Equal Access Regional Cancer Hospital cohort.

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Abstract

BACKGROUND: Approximately 29-38% of all positive surgical margins (PSMs) at radical prostatectomy (RP) involve the apex. The prognostic significance of apical PSM remains unclear. We therefore compared the long-term oncologic outcomes of men with apical PSMs to those with negative PSMs, apical and other PSMs, and other PSMs at RP.

METHODS: The SEARCH (Shared Equal Access Regional Cancer Hospital) database was used to identify 4031 men with prostate cancer (PCa) managed with RP with complete pathologic grade and stage data. Margin status was categorized as negative, apex only, or other positive. Multivariable Cox regression models adjusted for pathologic stage and grade were developed to test the relationship between margin status and biochemical recurrence (BCR), metastases and PCa death.

RESULTS: In the final cohort, 34.3% had PSMs, whereas 65.7% had negative margins. Univariable analysis showed that compared with negative margins, apex-only PSM was associated with BCR (hazard ratio (HR): 1.4 [1.1-1.8]), but not metastases or PCa death, whereas apex and other PSMs were associated with BCR (HR: 3.3 [2.8-4]) and metastases (HR: 1.8 [1.02-3.1]) but not PCa death. Nonapical PSMs were associated with BCR (HR: 2.7 [2.4-3.1]), metastases (1.7 [1.2-2.5]) and PCa death (1.8 [1.05-3]). On multivariable analysis, apex-only, apex and other, and nonapical PSMs were associated with BCR but margin status was not associated with metastases or PCa death.

CONCLUSIONS: In a large cohort of men undergoing RP, those with PSMs at the prostatic apex had lower BCR, metastases, or PCa death compared with those with PSMs at other locations. When adjusted for pathologic stage and grade, however, PSMs were associated with BCR but not long-term oncologic outcomes. These data confirm that men with apex-only PSMs may not be ideal candidates for adjuvant therapy after RP.

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