Juxtatumoral stromal reactions in uterine endometrioid adenocarcinoma and their prognostic significance.

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Abstract
Uterine endometrioid adenocarcinoma is the most common invasive tumor of the female genital tract in the United States. Tumor invading into myometrium frequently induces juxtatumoral stromal changes resulting in a desmoplastic reaction or host inflammatory response. However, the relationship between stromal reactions and tumor progression in these tumors has not been well established. We thus examined a total of 103 consecutive cases of invasive uterine endometrioid adenocarcinoma in an attempt to determine if an association exists between the stromal reactions and other well-defined histologic and clinical prognostic factors. We found that the presence of a desmoplastic reaction was associated with a higher International Federation of Gynecology and Obstetrics (FIGO) grade (P<0.01) and lymphovascular invasion (LVI) (P<0.05), and advanced FIGO stage (stage IB vs. IC, P<0.01; stage I vs. II/III/IV, P<0.05). The intensity of the inflammatory lymphocytic response (none/mild vs. moderate/severe) was inversely associated with advanced tumor stage (P<0.05), but not associated with tumor grade or LVI. Our findings revealed that a strong lymphocytic stromal response was predominantly found in the uterine endometrioid adenocarcinomas with early clinical stages. In contrast, a juxtatumoral desmoplastic reaction was more frequently identified in moderately to poorly differentiated tumors with LVI and advanced clinical stages. Multivariate analysis showed that a desmoplastic reaction, LVI, and advanced FIGO stage were significantly associated with unfavorable outcome. The presence of a desmoplastic reaction in the
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stroma should prompt the pathologist to search for other histologically unfavorable prognostic indicators such as cervical involvement and nodal metastasis. This is even more important in those cases where no staging procedure was performed and in cases where the tumor was an incidental finding.

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