OBJECTIVES: The aims of this study were to investigate the expression of CD10 in normal bladder tissue and urothelial bladder carcinomas and to clarify its association with histopathological variables.

MATERIALS AND METHODS: A total of 79 urothelial bladder carcinomas were selected from routine archival material. All cases were reevaluated histopathologically and graded according to the World Health Organization (WHO) 1973, WHO/ISUP 1998, and WHO 1999 systems. The TNM system was used for their pathological staging. CD10 immunohistochemical staining was performed in selected slides.

RESULTS: Tumoral cases consisted of 74 men (93.7%) and 5 women (6.3%). According to the pathological stage, 25 (31.6%), 33 (41.8%), and 21 (26.6%) cases had pTa, pT1, and pT2-3 carcinomas, respectively. 34 of 79 (43%) urothelial carcinomas and only 1 of 11 (9.1%) nontumoral cases showed positive CD10 immunostaining. It was a cytoplasmic diffuse or granular immunostaining pattern both in nontumoral and tumoral urothelia. There was no statistically significant difference between tumoral and nontumoral cases with respect to CD10 reactivity (p = 0.051), but there was a trend toward significance. In urothelial tumors, there was a significant inverse correlation between pathological stages and CD10 immunoreactivity (p = 0.036, r = -0.237). There was also a statistically significant difference between pTa and pT2-3 urothelial tumors in relation to the CD10 expression (p = 0.034). No association was detected between CD10 expression and grades according to all systems used (p > 0.05).

CONCLUSIONS: According to our findings, the CD10 expression in noninvasive carcinomas showed a higher level than that in invasive carcinomas, and it is inversely correlated with the pathological stage. CD10 may play an important role in the progression of urothelial bladder carcinomas, and downregulation probably facilitates invasion, especially muscle invasion.

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