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Neuroendocrine Carcinomas of the Uterine Cervix: A Clinicopathological Study

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Abstract

Background: Neuroendocrine carcinoma (NEC) is a rare entity of uterine cervical carcinoma. Most of them have a more aggressive course and worse prognosis than a common type squamous cell carcinoma. Therefore, precise diagnosis is very crucial.

Objective: To study clinicopathological correlation and immunohistochemistry of uterine cervical NEC.

Material and Method: All primary uterine cervical carcinomas from a 51-month period were histopathologically reviewed. Suspicious NECs were retrieved and immunohistochemically studied for chromogranin, synaptophysin, non-specific esterase (NSE) and CD56. Clinical information including treatments and mean disease free survival time were obtained from chart review.

Results: Fourteen (3.5%) cases of NEC were identified from 389 primary uterine cervical carcinomas between October 1, 2002 and December 31, 2006 and classified into small cell neuroendocrine carcinoma (SNEC, 8 cases), large cell neuroendocrine carcinoma (LNEC, 3 cases), mixed SNEC and adenocarcinoma (2 cases), and mixed SNEC and squamous cell carcinoma (1 case). All NEC presented with abnormal vaginal bleeding. The median age was 44 years (34-75 years). Exophytic mass was noted in 11 patients (78.6%). Five patients (36%) had distant metastases. All cases were immunoreactive for at least two neuroendocrine markers. Nine cases (64.3%) were positive for chromogranin, 11 (78.6%) for synaptophysin, 12 (85.7%) for NSE, and 11 (78.6%) for CD56. CD56 was positive in eight of 11 SNEC cases. The mean disease free interval and overall survival time were 17.5 and 23.9 months, respectively.

Conclusion: Neuroendocrine carcinoma of the cervix is rare and has poor prognosis. In addition to histopathology, panel of immunohistochemistry is mandatory in the diagnosis of neuroendocrine carcinoma. Varying results of immunohistochemistry may be found.

Keywords: Neuroendocrine carcinoma, Cervical carcinoma, Small cell carcinoma, CD56

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