Expression of VEGF and podoplanin in uterine cervical intraepithelial lesions

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BACKGROUND

VEGF and podoplanin (PDPN) have been identified as angiogenesis and/or lymphangiogenesis regulators and might be essential to restrict tumor growth, progression and metastasis.

OBJECTIVES

The aim of the present study was to evaluate and correlate the immunohistochemical expression of VEGF and PDPN in cervical epithelial cells of different degrees of squamous intraepithelial neoplasia and also in non-neoplastic cervical tissue.

RESULTS

VEGF immunoexpression was detected in the cytoplasm (figure 1) and the comparison of staining intensity between the different groups showed a statistically significant difference (p<0.001).

Negative and/or focal immunostaining for PDPN (figure 2) were more frequent in CIN 3 in comparisons between the different groups (P = 0.016).

Our data revealed that the the CIN 3 group demonstrated higher frequency of strong VEGF immunoexpression combined with negative/focal PDPN expression (60.0%) when compared to strong VEGF immunoexpression combined with diffuse PDPN expression (41.7%) (p = 0.018).

CONCLUSIONS

Strong and more diffuse VEGF immunoexpressions in CIN 2 and CIN 3 was detected when compared to CIN 1. Negative and/or focal PDPN immunoexpression appear to be more frequent in CIN 3. Moderate to strong VEGF expression may be a tendency among patients with high-grade lesions and diminished PDPN expression.

REFERENCES