

عنوان مقاله:

study of prostate cancer metastasis in bone

محل انتشار:

دومین کنگره بین المللی پزشکی شخصی (سال: 1396)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Metastasis to bone is common in prostate cancer. in this cancer, the bone is often the only clinically detectable site of metastasis, and the resulting tumours tend to be osteoblastic (bone forming) rather than osteolytic (bone lysing). The interaction between host cells and metastatic cancer cells is an important component of organ-specific cancer progression. Western blot analysis and RT-PCR was used to determine BMP receptor expression on osteoblastic prostate cancer cell lines LAPC-4 and LAPC-9. Migration, invasion, and cellular proliferation assays were used to quantify the effects of BMP-2, -4, and -7 on LAPC-4 cells in vitro. LAPC-9 cells alone or transfected with a retrovirus overexpressing noggin were injected into the tibias of SCID mice, and the animals were followed for 12 weeks. We determined that BMP receptor mRNA and protein was expressed on osteoblastic prostate cancer cell lines LAPC-4 and LAPC-9. In vitro studies showed that BMP-2 and -7 stimulated cellular migration and invasion of prostate cancer cells in a dose-dependent fashion, although BMP-4 had no effect. Noggin inhibited cellular migration and invasion of BMP-2- and -7-stimulated LAPC-4 cells. LAPC-9 cells implanted into immunodeficient mouse tibias formed an osteoblastic lesion with sclerotic bone at 12 weeks. These findings suggest that BMPs are critical in the formation of the osteoblastic lesions associated with prostate cancer metastases, and the progression of osteoblastic metastases induced by human prostate cancer cells may be limited by BMP inhibitors.

کلمات کلیدی:

Metastasis, prostate cancer, osteolytic

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