عنوان مقاله:

Tumorigenicity of Esophageal Cancer Stem Cells (ECSCs) in nude mouse xenograft model

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خلاصه مقاله:

Background and objectives: Modeling cancer in vivo is a very important tool to investigate cancer pathogenesis and molecular mechanisms involved in cancer progression. Laboratory mice are the most common animal used for rebuilding human cancer in vivo. Cancer stem cells (CSCs) are the main reason of failure in cancer therapy because of tumor relapse and metastasis. Isolation of cancer stem cells helps us to study their function and behavior. In the current study we separate cancer stem-like cells using sphere formation assay then investigate their tumorigenicity in xenograft tumor model. Methods: YM1 cancer cells were cultured in serum-free media (SFM) in low adherent culture dishes for enrichment of cancer stem cells. The resulting spheres containing cancer stem-like cells were dissociated into single cells and were injected into the dorsal flank of B6 nude mice. Results: A few days after injection, subcutaneous tumors formed. The growth curves of the resulting tumors were plotted using their weekly recorded lengths. The tumorschr('39') volume and weight were measured. The size of resulting tumors was appropriate to the number of cells injected. Pathological analysis confirmed esophageal origin of the resulting tumors. Conclusion: Using laboratory mice models is a practical modeling system that provides us investigation of human tumors pathogenesis in vivo.

کلمات کلیدی:

Cancer stem cell, ESCC, Xenograft mouse model

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