

Expression of cystatin C in human esophageal cancer

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ABSTRACT

Aims and background. Cystatin C is a member of the cysteine protease inhibitors and its function is to decrease protease activity. A recent study showed that it was aberrantly expressed in many malignant tumors in association with tumor invasion and metastasis. We attempted to detect its expression in esophageal cancer tissues and adjacent reparative normal tissues.

Methods and design. Samples of cancers and non-cancerous esophageal tissues were obtained as matched pairs from 30 surgery patients with esophageal cancer and paraffin embedded. The expression of cystatin C in tissues was investigated by immunohistochemistry. Fisher's exact test was used to analyze the relationship between esophageal cancer tissues and adjacent normal tissues. Furthermore, mRNA was extracted, and reverse transcriptase polymerase chain reaction was performed.

Results. The intensity of cystatin C immunostaining in tumor tissues was increased compared to that of adjacent normal tissues. mRNA expression of the cystatin C gene was greater in esophageal cancer than in normal tissues ($P < 0.05$).

Conclusions. Our results indicate that cystatin C may play an important role in the pathogenesis and metastasis of esophageal cancer.

Key words: cystatin C, esophageal cancer, immunohistochemistry, reverse transcriptase-polymerase chain reaction.

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