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Clinicopathological significance of E-cadherin, β-catenin and p٥٣ expression in gastric adenocarinoma

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View references (٥٦)

Abstract

BACKGROUND: E-cadherin/catenin complexes exert a role in cell adhesion. β-catenin is a key player in Wnt signaling pathway in gastric cancer. P٥٣ is a tumor suppressor gene which also regulates apoptosis. We assessed the expression of E-cadherin, β-catenin and p٥٣ in gastric adenocarcinoma, and their correlations with clinicopathological features. METHODS: Fifty six formalin-fixed, paraffin-embedded archival specimens of gastric adenocarcinoma were randomly included as cases. Adjacent tumor-free gastric mucosa of different premalignant stages was obtained from the cases. Immunohistochemical staining was performed to assess E-cadherin, β-catenin and p٥٣ expression. RESULTS: All chronic atrophic gastritis and intestinal metaplasia revealed normal membranous staining. Only one patient with dysplasia had abnormal expression of E-cadherin and β-Catenin. Abnormal E-cadherin, β-catenin and p٥٣ expression was found in ٥٠٪, ٤٨,٢٪ and ٧٦,٨٪ of cancer specimens respectively. Abnormal expression of E-cadherin was significantly correlated with aberrant β-catenin expression. Abnormal E-cadherin and β-catenin expression were significantly correlated with depth of tumor invasion and advanced gastric cancer ($p < ٠,٠٥$), lower degree of differentiation and diffused tumor type ($p < ٠,٠٠١$). Node metastasis was not influenced by abnormal expression of E-cadherin and β-catenin. P٥٣ was not associated with clinicopathological variables. CONCLUSIONS: Abnormal expression of the E-cadherin and β-catenin were associated with each other and influenced by histogenesis of gastric cancer and malignant behavior of tumor but not significant in premalignant lesions. They are more frequent in diffuse type and associated with advanced gastric cancer. P٥٣ alterations are more frequent in the Iranian population compared with others.

Reaxys Database Information

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Author keywords

β-catenin; E-cadherin; Gastric cancer; Immunohistochemistry; p٥٣

Indexed Keywords

EMTREE drug terms: beta catenin; protein p٥٣; uvomorulin

EMTREE medical terms: adult; advanced cancer; aged; article; atrophic gastritis; cancer grading; cancer invasion; cancer staging; cell membrane; chronic disease; clinical feature; controlled study; female; gastrointestinal dysplasia; gene expression; human; human cell; human tissue; immunohistochemistry; intestine metaplasia; major clinical study; male; protein expression; stomach adenocarcinoma; tumor differentiation; tumor suppressor gene

Chemicals and CAS Registry Numbers: uvomorulin, ١١٢٩٥٦-٤٥-٣