Evaluation of a novel clinicopathological marker JK-1 for human esophageal carcinoma

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Abstract

Esophageal squamous cell carcinoma (ESCC) has been reported to be caused by multiple genomic factors, including the amplification and overexpression of oncogenes, which lead to the malignant transformation of normal cells. Our group previously reported a novel oncogene *JK-1* in ESCC which is located in the chromosomal region 5p15.1-2 and it frequently shows amplification in ESCC. Recently, the overexpression of *JK-1* mRNA in colorectal tumors was also reported, providing the strong evidence for the significance of *JK-1* mRNA ovexpression in these two types of gastrointestinal cancers. In this study, three-hundred and three samples of esophageal squamous cell carcinoma (ESCC) cases with paired tumor and non-tumor samples were studied for the protein expression level of JK-1 using tissue microarray and immunohistochemical staining methods. The detection of the differential JK-1 expression levels was then correlated with the clinicopathological features of the cases by statistical analysis. The expression level of JK-1 was found to be associated with the tumor features in which the JK-1 high-expression group was significantly correlated with the poorly differentiated tumors ($p=0.02$), local metastasis ($p=0.036$) and the shorter survival time (36.09 months vs. 61.02 months in the low-expression group). Moreover, 14 out of 16 cases (87.5%) with premalignant epithelia also showed high-expression level of JK1, suggesting the possible involvement of JK-1 in the early transformation of esophageal epithelia. Thus the overall results of the present study provided the first evidence about the prognostic significance of JK-1 expression in ESCC that may be beneficial to the management of ESCC in future. The findings of the present study also support the future direction of extending the detection of JK-1 expression in other cancers for studying its prognostic significance.

Biography

Johnny C O Tang has completed his PhD from The University of Hong Kong. He is currently the Assistant Professor in the Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University, Hong Kong, P R China. He has published more than 90 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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