

Gene expression of CDK6 and CCND1 genes in basal cell carcinoma

ABSTRACT

Basal cell carcinoma (BCC) is the most common cancer among skin cancers. Cell cycle deregulation in G1-phase is a critical event during the course of carcinogenesis, which is probably much more important than other phases of cell cycle, during the course of skin carcinogenesis. CCND1 and CDK6 are important components of Retinoblastoma regulatory pathway in arrest and uncontrolled proliferation of cell cycle. To determine the expression pattern of CDK6, CCND1 in BCC, this study involved ten samples of paraffin embedded of BCC tissues. Two selected normal skin tissue were investigated using RT in situ PCR and Immunohistochemistry (IHC) techniques. Nuclear and cytoplasmic staining intensity of samples within tumor cells and normal tissue illustrated a different mRNA and protein expression. This study represents significant expression of CCND1 and CDK6 genes in BCC (alpha level is 0.05). CDK6 and CCND1 mRNA, and protein of these genes are expressed to induce the cell cycle proliferation and the influence proliferation of cell cycle and BCC.

Keyword: Cancer; Skin cancer; CCND1 gene; Basal cell carcinoma