MUTATIONAL ANALYSIS OF THE BH3 DOMAINS OF PROAPOPTOTIC Bcl-2 FAMILY GENES Bad, Bmf AND Bcl-G IN LARYNGEAL SQUAMOUS CELL CARCINOMAS

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Aims: There is mounting evidence that deregulation of apoptosis is involved in the mechanisms of cancer development. Somatic mutations of apoptosis-related genes have been reported in many human cancers. The aim of this study was to explore the possibility that mutation of the BH3 domains of the proapoptotic Bcl-2 genes Bad, Bmf and Bcl-G might be involved in the development of laryngeal cancer.

Methods: We analyzed the BH3 domains of Bad, Bmf and Bcl-G for the detection of somatic mutations in 33 squamous cell carcinomas of the larynx by a polymerase chain reaction-based single-strand conformation polymorphism assay.

Results: There were no somatic mutations of the BH3 domains of Bad, Bmf and Bcl-G in the laryngeal squamous cell carcinoma samples.

Conclusions: The data presented here indicate that BH3 domain mutation of the proapoptotic genes Bad, Bmf and Bcl-G is rare in laryngeal squamous cell carcinoma and may not contribute to the apoptosis-resistance mechanisms of laryngeal squamous cell carcinoma.

Key words: apoptosis, BH3 domain, laryngeal cancer, mutation.