

## **LDOC1 gene expression in two patients with head and neck squamous cell carcinomas and Parkinson's disease**

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### ABSTRACT

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**Introduction.** Head and neck squamous cell carcinoma (HNSCC) is one of the most common cancers in the world. Risk factors for this cancer include tobacco and alcohol use, ultraviolet light exposure, and viral infection. Parkinson's disease is one of the most common neurodegenerative disorders, with a prevalence of 3% in persons over the age of 65 years. Apoptosis is a programmed cell death machinery pivotal for normal development, the establishment of highly organized neuronal circuitry, and the elimination of cancer cells. It has been suggested that increased expression of proapoptotic genes is associated with head tumors. One of these genes is the leucine zipper, down-regulated in cancer 1 (*LDOC1*) gene.

**Case report.** We report two interesting cases of a 79-year-old man and a 98-year-old woman, both with Parkinson's disease and well-differentiated multiple HNSCC, in whom we evaluated the possible differential expression of *LDOC1*.

**Results.** We found that *LDOC1* gene expression was increased in both patients compared with three male and three female controls.

**Conclusions.** These findings suggest that apoptosis may play a pathogenetic role in HNSCC.

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**Key words:** apoptosis, head and neck cancer, *LDOC1* gene, Parkinson's disease, qRT-PCR.

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