Docetaxel hidrat menghambat proliferasi dan metastasis sel kanker oral SP-C1 melalui induksi protein maspin

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Abstrak

Human oral tongue cancer (SP-C1) is thought to be a high grade malignancy. Despite advances in surgery, radiotherapy, chemotherapy and combination therapy, prognosis and survival of patients with human tongue cancer have not significantly improved over the past several decades. Treatment options for recurrent or refractory tongue cancer are limited. Therefore, as a strategy for refractory cancer, anti-mitotic chemotherapy and its mechanisms are of considerable interest, including those using docetaxel hydrate for inducing maspin protein. In the current study, the mechanisms responsible for growth suppression and metastasis of SP-C1 by docetaxel hydrate through induction of maspin regulation were investigated. To evaluate in vitro cell proliferation and cell metastasis, MTT and out-growth assays were performed, respectively. Furthermore, the expression of maspin mediated by docetaxel hydrate was analysed by Western blotting. The results showed that treatment with 50 g/ml docetaxel hydrate significantly suppressed SP-C1 cell growth from day 1. Strong inhibition of metastasis of SP-C1 cells was also shown by treatment with 50 g/ml of docetaxel hydrate. Moreover, a significant induction of maspin regulation was detected in cells treated with 10 and 50 g/ml of docetaxel hydrate. However, the same protein level was
demonstrated in -tubulin expression. These findings suggest that
docetaxel hydrate may have potential for powerful anti-mitotic
chemotherapy through induction of maspin regulation.