

CANCER

Paclitaxel—potential new application in anaplastic thyroid carcinoma

Induction therapy with paclitaxel is associated with improved survival in a subset of patients with anaplastic thyroid carcinoma (ATC), report Takuya Higashiyama and colleagues in *Thyroid*.

“Clinical benefit rates ... were high in patients with stage IVB ATC and stage IVC ATC...”

ATC has a very poor prognosis, with 90% of patients dying from the disease, often within a short period of time. The classification of ATC includes stage IVB, in which the tumor is not limited to the thyroid gland and is usually not amenable to surgery, and stage IVC, in which distant metastases occur. A combination of surgery, chemotherapy and radiotherapy is usually employed to treat patients.

“Paclitaxel was a familiar drug for us, because we use it often for breast cancer patients,” says Higashiyama. This drug had been used in one study to treat patients with ATC, but survival rates were not evaluated. Higashiyama and colleagues assessed the clinical and histological responses and overall survival of nine patients with stage IVB ATC and four patients with stage IVC ATC after weekly administration of paclitaxel as induction therapy. None of the patients had been previously treated for the disease. “The most important finding of our study is the statistically significant improvement of survival rate of stage IVB ATC patients,” summarizes Higashiyama.

Clinical benefit rates, assessed by analysis of CT scan images of the tumor location, were high in patients with stage IVB ATC and stage IVC ATC (56% and 75%, respectively). None of

the four patients with stage IVB ATC who underwent curative surgery after paclitaxel therapy had recurrence of ATC or developed distant metastases at 11–32 months of follow-up. Among the group with stage IVB ATC, survival rates were significantly higher in patients who received paclitaxel than in those who had been treated with any type of combined therapy that did not include paclitaxel.

All patients with stage IVC ATC died, but, Higashiyama explains, the number of these patients was too small for appropriate measure of survival rates. “Because we have no second line of chemotherapy when paclitaxel does not work, we should also seek alternative treatments for ATC.”

Joana Osório

Original article Higashiyama, T. *et al.* Induction chemotherapy with weekly paclitaxel administration for anaplastic thyroid carcinoma. *Thyroid* 20, 7–14 (2010)