Locally invasive differentiated thyroid carcinoma: some characteristics and results of treatment

KEYWORDS: Thyroid Neoplasms; Neoplasm Staging; Carcinoma, Papillary; Follicular; Treatment Outcome

Background: This study was performed with aim to analyze differentiated thyroid carcinoma (DTC) in patients staged as pathological T4 (pT4), related to the DTC patients staged as pT1-pT3.

Methods: 267 patients staged as pT1-pT4 were treated in a period from 1977 to 2000, and followed until the end of 2001. Out of the total number, 117 patients were staged as pT4, 49 patients as pT3, 78 patients as pT2, and 23 patients as pT1. All patients were treated surgically, by radiiodine and by hormonal therapy; some of them underwent external radiotherapy and/or chemotherapy.

Results: We staged 36 male and 81 female patients. pT4: 98 patients with papillary carcinoma (PAP), and 19 patients with follicular (FOL) DTC. In pT4 stage regional metastases (N1) were found in 68 patients, distant metastases (M1) in 21 patients, and disease related lethal outcome occurred in 10 patients. In pT1 stage N1 were present in 21 patients, M1 in 2 patients, and lethal outcome in 2 patients; in pT2 stage N1 was present in 37 patients, M1 in 8 patients, and lethal outcome in 5 patients; in pT3 stage N1 were present in 14 patients, M1 in 11 patients, and lethal outcome in 5 patients. Regional metastases of DTC patients were significantly more frequent in pT4 stage than in DTC patients staged as pT2 and pT3, but they were significantly more frequent in pT1 stage (p < 0.001). Distant metastases were significantly more frequent in DTC patients staged as pT4, related to the patients in pT1 and pT2 stage, but statistical difference was not significant to the patients staged as pT3. We did not find any statistical difference in lethal outcome between patients staged as pT4 and patients in pT1, pT2 or pT3 stages. Complete remission after treatment was achieved in 41.5% of pT4 patients, partial remission in 20.8%, unchanged status in 14.2%, exacerbation in 7.6%, disease related lethal outcome was observed in 8.5%, while 5.7% of patients died from concomitant diseases. The survival probability of all pT4 patients at 5 years was 0.904±0.0401, at 10 years 0.84±0.058, at 15 years 0.764±0.09. In pT4 patients with M1 the survival probability was significantly shorter.

Conclusion: DTC patients staged as pT4 had significantly more frequent N1 and M1 than patients staged as pT2-pT3, and more frequent M1 compared to patients in pT1 stage, but patients staged as pT1 had N1 very frequently, because most of them were detected after discovery of N1. Stage pT4 had no significant influence to the lethal outcome, related to patients staged as pT1-pT3. The expected survival in pT4 patients was long, probably as a result of multimodal treatment, including I-131.