Conservative management of well-differentiated thyroid cancer

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Background: Controversy exists over the optimal surgical treatment of well-differentiated thyroid cancer. Conservative surgical management reduces the risk of complications and maintains an overall survival rate equivalent to the more extensive approach.

Methods: We conducted a retrospective review of all patients with well-differentiated thyroid cancer greater than 1 cm (180 patients) who underwent surgery between 1982 and 2002 by a single general surgeon at our institution. The prevailing philosophy was to be as conservative as possible, and the predominant resection was lobectomy and isthmusectomy on the affected side.

Results: In total, 90% of patients were in a definable low-risk group: 75% had conservative surgery with 4 recurrences and no mortality, 25% had extensive surgery with 3 recurrences and no mortality. The other 10% were in a definable high-risk group: 90% had extensive surgery with 9 recurrences and 4 deaths. Overall, there were 22 sites of recurrence in 16 patients. There was no recurrence in the residual thyroid tissue, with a median follow-up of 10 years. Three recurrences occurred in the resected thyroid bed; each of these patients had undergone extensive surgery. Twelve recurrences were in lymph nodes; 67% of these patients had undergone extensive surgery. All except 1 of 7 distant metastases occurred in the high-risk group, despite the patient having undergone extensive local surgery. Recurrence did not affect survival in the low-risk group. The extensive surgery group had a 3.4% incidence of recurrent laryngeal nerve injury and a 1.1% incidence of permanent hypocalcemia, with none in the conservative surgery group.

Conclusion: Conservative surgery for low-risk patients with well-differentiated thyroid cancer appears to be sufficient and avoids complications without significantly increased risk for local, regional or distant recurrence.