

Survival and Long-Term Biochemical Cure in Medullary Thyroid Carcinoma in Denmark 1997–2014: A Nationwide Study

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Background: Survival of medullary thyroid carcinoma (MTC) subgroups in relation to the general population is poorly described. Data on the factors predicting long-term biochemical cure in MTC patients are nonexistent at a population level. A nationwide retrospective cohort study of MTC in Denmark from 1997 to 2014 was conducted, aiming to detect subgroups with survival similar to that of the general population and to identify prognostic factors for disease-specific survival and long-term biochemical cure.

Methods: The study included 220 patients identified from the nationwide Danish MTC cohort between 1997 and 2014. As a representative sample of the general population, a reference population matched 50:1 to the MTC cohort was used.

Results: Patients diagnosed with hereditary MTC by screening (hazard ratio [HR]=1.5 [confidence interval (CI) 0.5–4.3]), patients without regional metastases (HR=1.4 [CI 0.9–2.3]), and patients with stage I (HR=1.3 [CI 0.6–3.1]), stage II (HR=1.1 [CI 0.6–2.3]), and III (HR=1.3 [CI 0.4–4.2]) disease had an overall survival similar to the reference population. On multivariate analysis, the presence of distant metastases (HR=12.3 [CI 6.0–25.0]) predicted worse disease-specific survival, while the absence of regional lymph node metastases (odds ratio=40.1 [CI 12.0–133.7]) was the only independent prognostic factor for long-term biochemical cure.

Conclusions: Patients with hereditary MTC diagnosed by screening, patients without regional metastases, and patients with stages I, II, and III disease may have similar survival as the general population. The presence of distant metastases predicted worse disease-specific survival, while the absence of regional metastases predicted long-term biochemical cure.

Keywords: medullary thyroid carcinoma, survival, biochemical cure, nationwide, population-based, Denmark

Forfatterens kommentar:

Studiet indikerer at patienter med medullær thyroideacancer (MTC) uden regionale lymfeknudemetastaser, patienter med MTC i stadie I-III og patienter med arvelig MTC fundet ved screening, muligvis har samme overlevelse som baggrundsbefolkningen. Den vigtigste prognostiske faktor for sygdomsspecifik overlevelse var tilstedeværelsen af fjernmetastaser, mens den vigtigste prognostiske faktor for langvarig biokemisk helbredelse (umålelig s-calcitonin) var fravær af regionale lymfeknudemetastaser. Studiet er det første af sin art i en uselekeret populationsbaseret kohorte. Fundene understreger vigtigheden af diagnosticering af MTC inden der er sket spredning til regionale lymfeknudemetastaser, samt vigtigheden i screening for arvelig MTC.