



Thyroid lesions in patients with acromegaly–case-control study

Kosma Woliński, Adam Stangierski, Edyta Gurgul, Agata Czarnywojtek, Marek Ruchala



Department of Endocrinology, Metabolism and Internal Medicine

Poznan University of Medical Sciences, Poland

INTRODUCTION

Acromegaly is a disease caused by excessive secretion of growth hormone and subsequently insulin growth factor 1. It is believed that this oversecretion can cause increased prevalence of nodular goiter and thyroid cancer. However, the amount of studies comparing acromegalic patients with control groups is low. The aim of the study was to assess the prevalence of thyroid lesions in patients with acromegaly in comparison with age and sex-matched control group.

PATIENTS AND METHODS

We have searched the medical documentation of patients with acromegaly treated in single endocrine department in the years 2003-2013. The prevalence of thyroid lesions was compared with the group of patients with hormonally inactive adrenal *incidentalomas*. Thyroid ultrasonography is routine procedure performing in every patient hospitalized in our department.

RESULTS

205 patients with acromegaly and 184 patients with *incidentalomas* were included. Mean age was 52.6 and 53.9 years respectively ($p=0.44$), percent of women – 60.5 vs. 65.2% respectively ($p=0.35$). Any thyroid lesions were present in 77.6% of patients with acromegaly and 63.0% with *incidentalomas* ($p=0.002$), multinodular goiter in 66.8% vs. 47.8% ($p=0.0002$), thyroid cancer in 5.4% vs. 2.7% ($p=0.21$) respectively. RRs were 1.2 with 95% confidence interval (CI) 1.1–1.4, 1.3 (1.1–1.6) and 2.0 (95% CI 0.7–5.6) respectively. In case of subjects with at least one thyroid lesion, maximal diameter of the biggest thyroid lesion was significantly higher in patients with acromegaly than in control group – median 13.0 vs. 9.0 mm ($p=0.0008$). Also the mean thyroid volume was significantly higher in acromegalic patients (35.5 vs. 17.7 cm³, $p<0.0001$).

Comparison between acromegalic patients and control group

	Acromegalic patients	control group	P
age [years] mean ± SD median range	52.6 ± 12.2 54.0 22 - 83	53.9 ± 12.7 53 18 – 88	0.44
gender	124 F / 81 M	120 F / 64 M	0.33
Thyroid lesions	159 (77.6%)	116 (63.0%)	0.002
Multinodular goiter	137 (66.8%)	88 (47.8%)	0.0002
Thyroid cancer	11 (5.4%)	5 (2.7%)	0.21
Thyroid volume (cm ³) mean ± SD Median	35.5 ± 36.9 26.1	17.7 ± 12.3 14.9	<0.0001

CONCLUSIONS

Structural thyroid abnormalities are significantly more common in patients with acromegaly. Our study, performed on one of the largest described groups of acromegalic patients, confirms that systematic thyroid examination should be important part of follow-up in case of patients with acromegaly.

Contact: kosma1644@poczta.onet.pl or mruchala@ump.edu.pl

