Characterization of thyroid nodules in acromegalic patients
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**Background**

Prevalence of thyroid nodules in acromegalic patients ranges from 34-77%.
Prevalence of thyroid cancer in acromegalic patients ranges between 4-11.4%. There is an increased risk of thyroid cancer in ACM vs. normal population (RR= 7.2 – 10.21).

**Aim**

To assess prevalence of thyroid nodules and of thyroid cancer in a series of acromegalic patients.

**Methods**

- 62 patients with acromegaly (16 M/ 46 F) were retrospectively reviewed; 25 patients (40.3%) were residents in iodine deficient areas; average age at diagnosis: 43.7 ± 12.8 years; median follow-up period: 8 years (range: 1-31 years);
- GH, IGF1, TSH, FT4: chemiluminescence (Liaison);
- Thyroid ultrasound -volume (ml)= d x w x l x 0.479;
- Fine needle aspiration biopsy and citology exam in suspected nodules;
- Pathology exam in patients submitted to surgery.

**Results**

- TSH and thyroid volume in acromegalic patients
  - Median Thyroid volume: 19.65 mL
  - 25\textsuperscript{th} percentile: 14.85 mL
  - 75\textsuperscript{th} percentile: 28.6 mL
  - Negative correlation with TSH: r=0.3, p= 0.03

- IGF1 in acromegalic patients without/with thyroid nodules

- Thyroid morphology on ultrasound

- Thyroid volume in acromegalic patients without/with thyroid nodules

**Conclusions**

- thyroid nodules and differentiated thyroid carcinoma (especially papillary) had a high prevalence in acromegalic patients;
- thyroid micro-carcinomas are probably over-diagnosed among acromegalic patients due to extensive endocrine work-up;
- thyroid ultrasound and, when appropriate, fine needle aspiration are mandatory in acromegalic patients for early diagnosis and therapeutic intervention.