



# Amiodarone-Induced Thyrotoxicosis

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## BACKGROUND

Amiodarone is an antiarrhythmic drug mainly used in atrial fibrillation. Amiodarone-induced thyrotoxicosis (AIT) is less common than hypothyroidism, but it represents a true therapeutic challenge. AIT can be due iodine load (type 1) or a destructive thyroiditis (type 2).

## METHODS

Retrospective study of patients with AIT, diagnosed between 2010 and 2015, in a central hospital. We reviewed medical records regarding age, gender, amiodarone therapy, hospitalizations, cardiovascular events, thyroid function and therapy. We used descriptive statistics, t-test for continuous variables and chi-squared distribution for categorical variables.

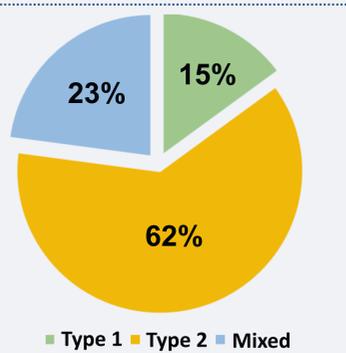
## RESULTS

n = 40 patients with AIT

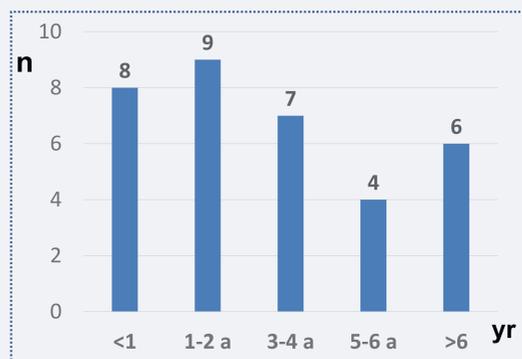
### Population

♂ = 20 ♀ = 20

### Gender



### AIT Type



### Amiodarone treatment duration

### Symptoms and signals

Atrial fibrillation	62,5%
Cardiac insufficiency	12,5%
Lethargy	4%
Weight loss	4%
Tremor	3%
No complains	14%

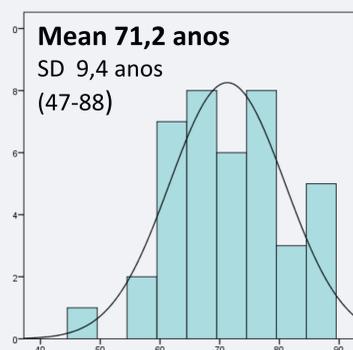
### Inpatients

47,5% due to atrial fibrillation or cardiac insufficiency

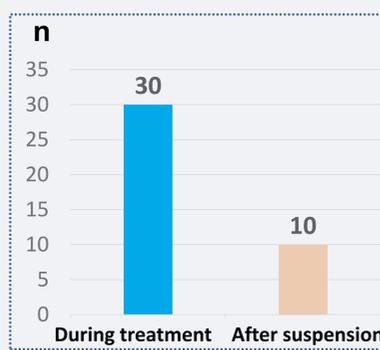
### Thyroid US

Micronodular goiter	50%
Thyroid nodule(s) 1-4cm	23%
Thyroiditis pattern	21%
Normal	6%

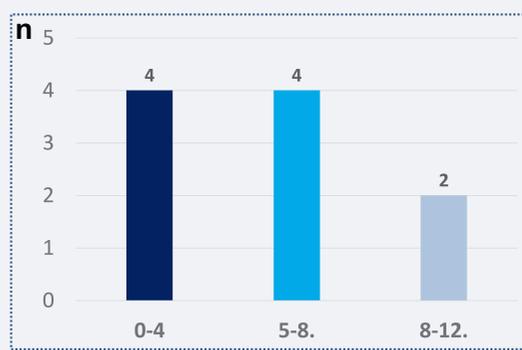
### Presentation



### Age



### AIT development



### Months since suspension until AIT

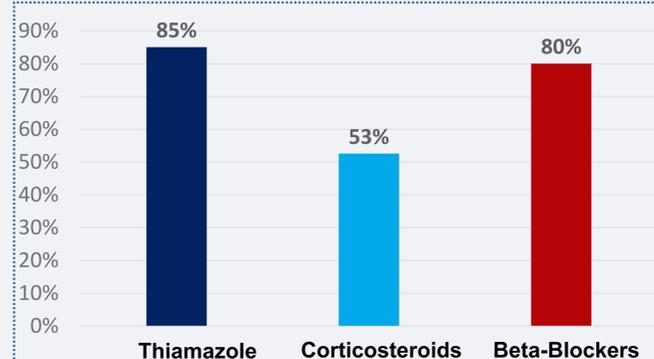
**TSH** <0,01 in 89,5% patients (0,5 - 4,0)  
The rest with values 0,02 - 0,11

**FT4** 46 ± 22,2 pmol/L (17,7 - >90) (10 - 28)  
Significantly higher values in type 2 AIT (p=0,014)

**FT3** 10,6 ± 5,03 pmol/L (4,35 - >30) (4,26-8,10)

**Ac anti-TPO / TRAb** more common in type 1 (p<0.01)

### Workup



### Mean Duration 11,5 months (2-48)

significantly higher in type 1 AIT (p<0,01)

### Treatment

### Resolution

- ✓ Medication 70%
- ✓ Radiodine 2,5% (TA)
- ✓ Surgery 5% (GD)

### Events

Cardiovascular events 10  
Hospitalizations 14  
Mortality 3

### Monitoring

## Conclusion

AIT is a concern in elderly people, because treatment is challenging. Patients treated with Amiodarone and AIT need frequent hospitalizations.

Type 2 AIT was the most frequent (62,5%), with higher FT4 (p=0,014), but treatment duration was smaller (p<0,001).