Management of amiodarone induced thyrotoxicosis within the United Kingdom: is it time for a consensus guideline? A single centre retrospective review

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Introduction

- Amiodarone induced thyrotoxicosis (AIT) remains a diagnostic and therapeutic challenge.
- AIT is classified as
  - type 1 (underlying latent thyroid disorder)
  - type 2 (destructive thyroiditis).
- Type 1 and 2 are treated differently however, in many cases, the precise aetiology of AIT is unclear at the time of presentation.
- There is currently no UK wide guidance on management of AIT
- We present a retrospective review of consecutive cases treated for AIT in our department over 4 years.

Methods

- Audit study period: 2010-2014
- Thirty-nine patients presenting with AIT were studied, with complete data available on thirty-three.
- Key audit data
  - Duration of amiodarone therapy prior to diagnosis
  - Type of AIT
  - Thyroid peroxidase antibody (TPO) levels
  - Imaging
  - Time to remission of AIT
  - Treatment strategy

Results

- Age: Average age 66 years (range: 30 – 81 years)
- Sex: Predominantly men (79%)
- Duration of amiodarone therapy: Average 45 months (range: 8 – 132 months)
- TPO status: TPO positive 3 patients (9%), TPO negative 24 patients (73%), TPO status not checked 6 patients (18%)
- Amiodarone was discontinued in 28 (85%) patients
- Two patients underwent emergency thyroidectomy post medical treatment while only one patient was referred for radiiodine (RAI) ablation.
- No significant difference in time to remission with or without Amiodarone therapy (3 vs. 2.8 months).

Conclusions

- In the absence of clear guidelines for classification and management of both types of AIT, overall practice remains primarily determined by individual clinician’s experience as highlighted in surveys undertaken by both the European Thyroid association and within the United Kingdom.
- Our review further highlights differences in practice amongst endocrinologists in the diagnosis and management of AIT.
- Based on our audit findings, we propose a practical and evidence-base guide in management of AIT.

Recommendations

- AIT suspected
  - Check TPO levels
  - Thyroid uptake (Tc99m) scan
  - Start CMZ 20mg BD + prednisolone 30mg
  - Stop amiodarone where possible
  - Repeat thyroid function tests (TFTs) in 2-4 weeks
  - Good response to combination treatment with low/normal uptake – Suspect type 2 AIT
  - Slow response to combination treatment with increased uptake – Suspect type 1 AIT
  - Wean off Carbimazole with 4-6 weekly monitoring TFTs
  - Wean off steroids with 4-6 weekly monitoring TFTs
  - Suspect mixed disease in case of deterioration on weaning off carbimazole (type 2) or steroids (type 1)
  - Consider surgery/RAI in case of non-responders

References