

# Amiodarone Hyperthyreose (und andere Nebenwirkungen)

16. Zürcher Herz-Kurs

29.9.2016

# Amiodarone-Hyperthyreose

- Häufigkeit
  - 2% pro Jahr
- Klinik
  - Gewichtsabnahme (2/3)
  - Zunahme Palpitationen (1/3)
- Labor-Untersuchungen
  - fT4, fT3, TSH
  - Schilddrüsen-Antikörper
- Zusatzuntersuchung
  - Durchblutung SD mittels Farbdoppler-Sonografie

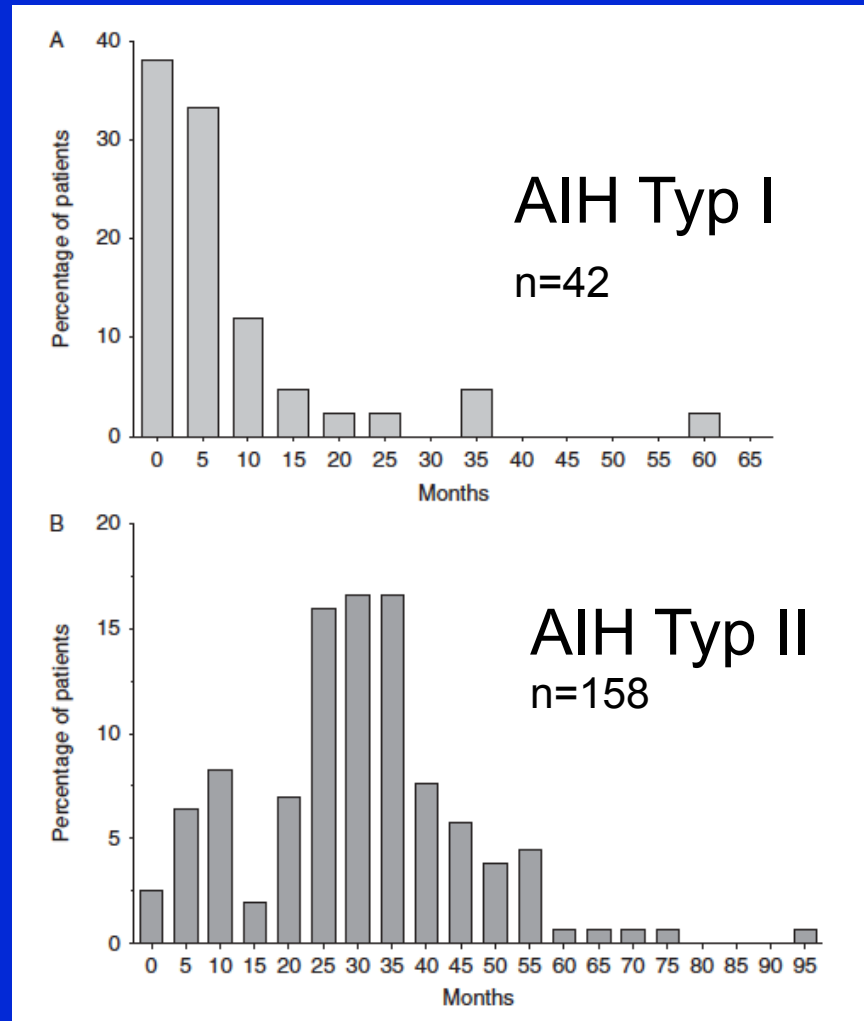
# Amiodarone-induzierte Hyperthyreose

## Einteilung

	AIH Typ I	AIH Typ II
	Jod-Basedow	Thyreoiditis
Jodmangel-Gebiet	+++	+
Mechanismus	Überproduktion	Freisetzung
Durchblutung	Erhöht	Vermindert
SD-Antikörper	+++	+
Hypothyreose	Nein	Möglich (AK+)

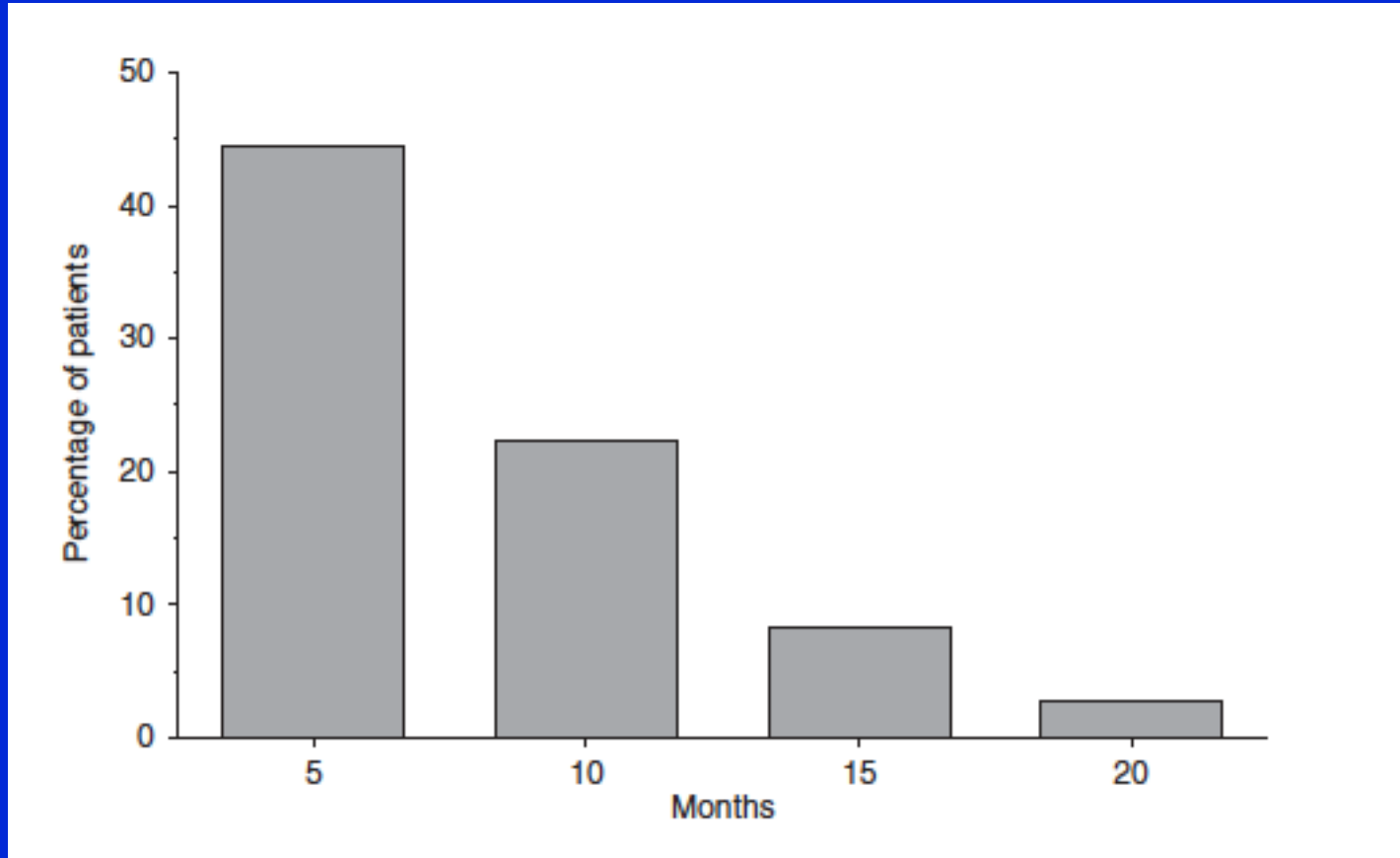
# Jodbasedow (Typ I) vs Thyreoiditis (Typ II) Latenzzeit nach Beginn Amiodarone

Tomisti et al Eur J Endocrinol 2014;171;363-68



# Thyreoiditis ( AIH Typ II): Latenzzeit nach Stop Amiodarone (23% der Fälle)

Tomisti et al Eur J Endocrinol 2014;171;363-68

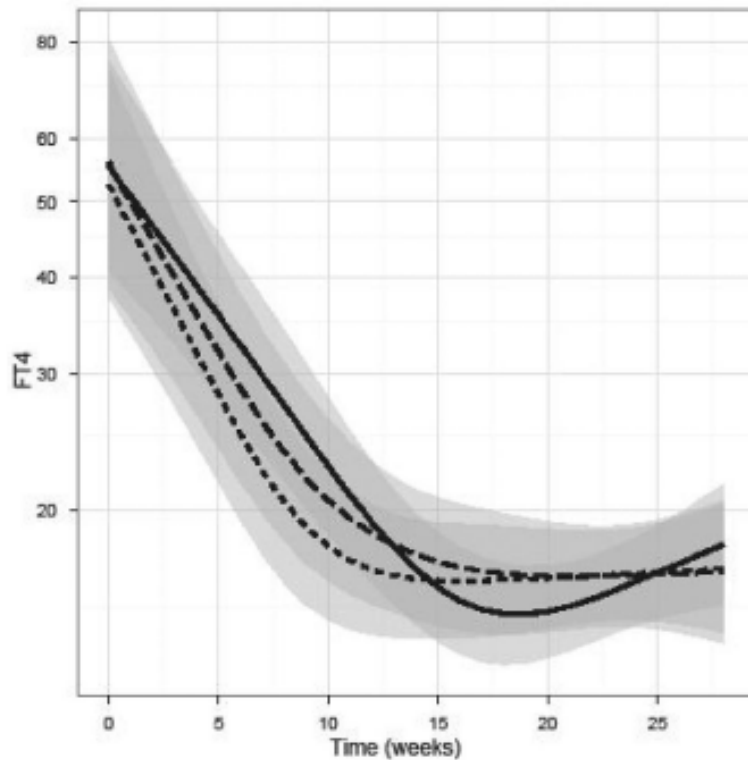


# Therapien

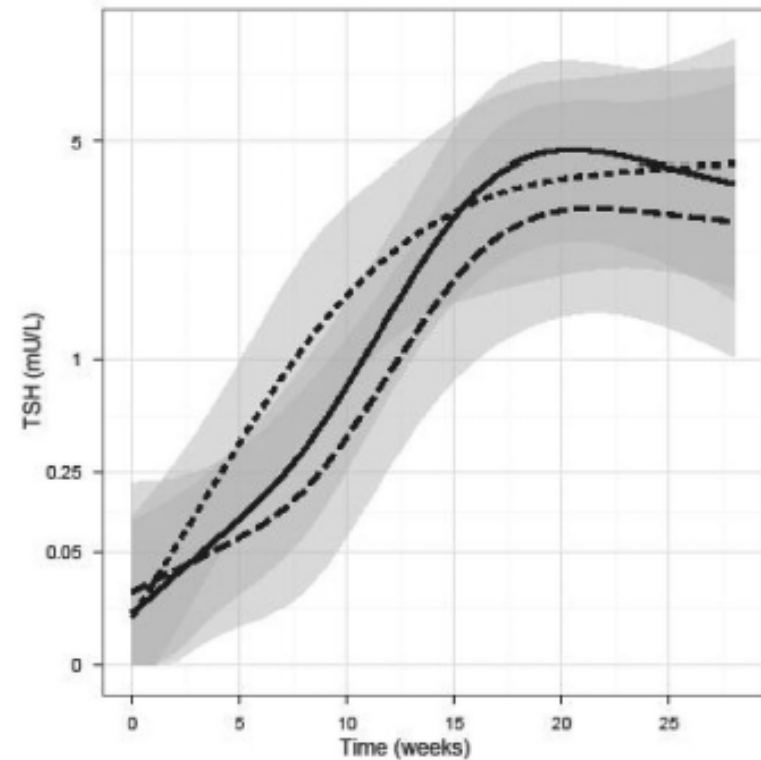
- AIH Typ I
  - Thyreostatika,
  - Amiodarone stop falls möglich
  - KM vermeiden
  - Prednison 30 mg falls keine Besserung
- AIH Typ II
  - Thyreostatika plus Prednison 30 mg
  - Amiodarone stop nicht nötig

# Therapie AIH Typ II unter Amiodarone

Eskes et al JCEM 2012;97;499-506



Treatment  
— perchlorate + methimazole  
- - prednisone + methimazole  
· · prednisone + perchlorate + methimazole



Treatment  
— perchlorate + methimazole  
- - prednisone + methimazole  
· · prednisone + perchlorate + methimazole

# Thyreoidektomie bei kardialer Verschlechterung oder Therapieversagen

Tomisti et al JCEM 2012;97; 3515-21

**TABLE 3.** Indications to thyroidectomy

	<b>Group 1 (n = 9)</b>	<b>Group 2 (n = 5)</b>	<b>Group 3 (n = 10)</b>
Worsening of cardiac conditions	8	1	
Thyroid cancer	1		
Unresponsiveness to medical therapy		3	8
Side effects to glucocorticoids			1
Continuation of amiodarone therapy		1	1



# Verlauf nach Thyreoidektomie

**TABLE 5.** Changes in EF values after restoration of euthyroidism

	Group 1	Group 2	Group 3
EF before surgery (%)	28.2 ± 7.2	42.8 ± 2.4	57.1 ± 3.0
EF after surgery (%)	38.3 ± 6.0	45.0 ± 5.8	59.8 ± 6.6
ΔEF (%)	10.1 ± 7.1 <sup>a,b</sup>	2.2 ± 6.1 <sup>a,b</sup>	2.7 ± 5.5 <sup>a,c</sup>
Improvement, n (%)	4/9 (44.4)	1/5 (20.0)	0/10 (0)
(95% CI, Klopfer-Pearson)	(0.137–0.788)	(0.005–0.716)	
<i>P</i>	<0.05		

CI, Confidence interval; ΔEF, mean difference between EF after surgery and EF before surgery.

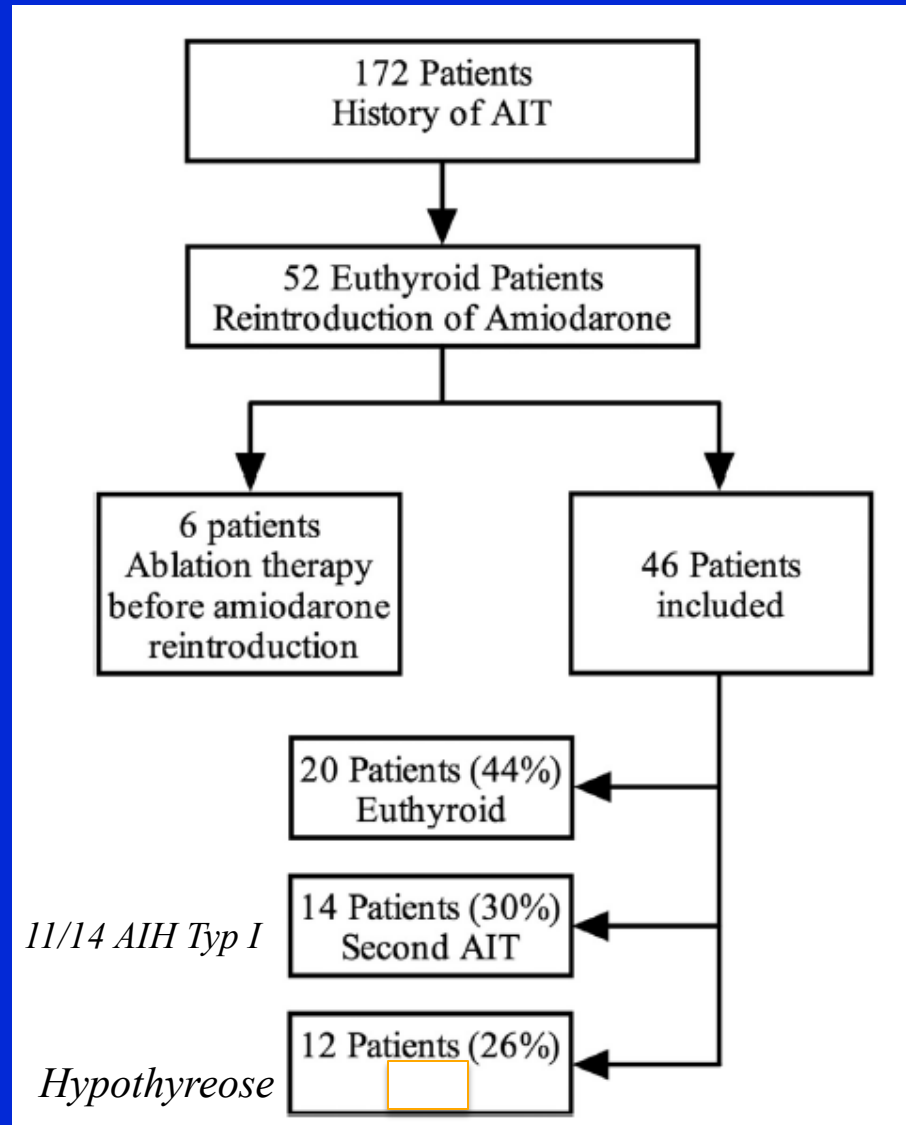
<sup>a</sup> *P* value for intragroup comparison (paired *t* test): *P* = 0.003 for group 1; *P* = 0.470 for group 2; *P* = 0.148 for group 3.

<sup>b</sup> *P* value for multiple comparison by Dunnett test: *P* = 0.035 for group 1 vs. group 3 (controls); *P* = 0.981 for group 2 vs. group 3.

<sup>c</sup> ANOVA *P* = 0.032. Improvement refers to change of EF class.

# Re-Exposition nach Amiodarone Hyperthyreose

Maqdasy et al, Am J Cardiol 2016;117;1112-16



# Präventive Thyreostatika

Maqdasy et al, Am J Cardiol 2016;117;1112-16

1st AIT type	Preventive thioamide	No. of Patients	Recurrence of AIT	Total	<i>p</i>
1	+	19	3 (16%)	11 (37%)	<0.05
	0	11	8 (73%)		
2	+	5	1 (20%)	3 (19%)	0.72
	0	11	2 (18%)		

	AIH Typ I	AIH Typ II
<u>Schilddrüse</u>	<u>Jod-Basedow</u>	<u>Thyreoiditis</u>
<u>Amiodarone</u>	Hyperperfusion	Normal
<u>Therapie</u>	Stop, kein KM	Weiter
<u>Hypothyreose</u>	Thionamide	Thionamide+PRD
<u>Re-Exposition</u>	Nein	Möglich (AK+)
	Thionamide prophylaktisch	Beobachten

Danke für die Aufmerksamkeit



