PHARMACOKINETIC DRUG INTERACTIONS DUE TO TREATMENT WITH AMIODARONE - A PRACTICAL APPROACH
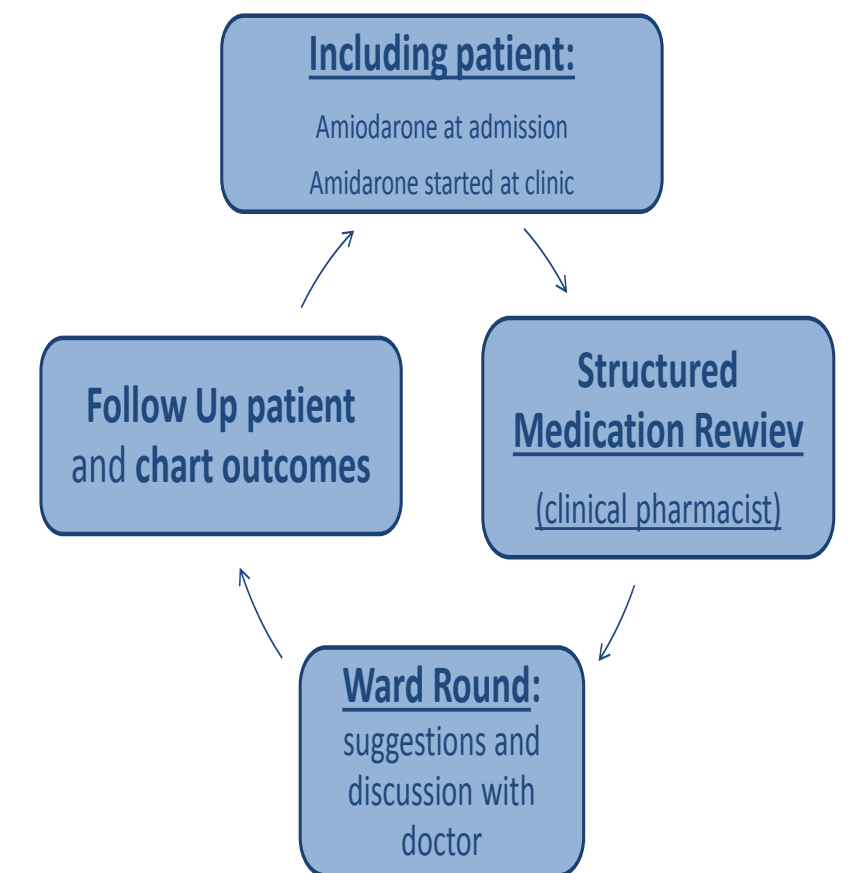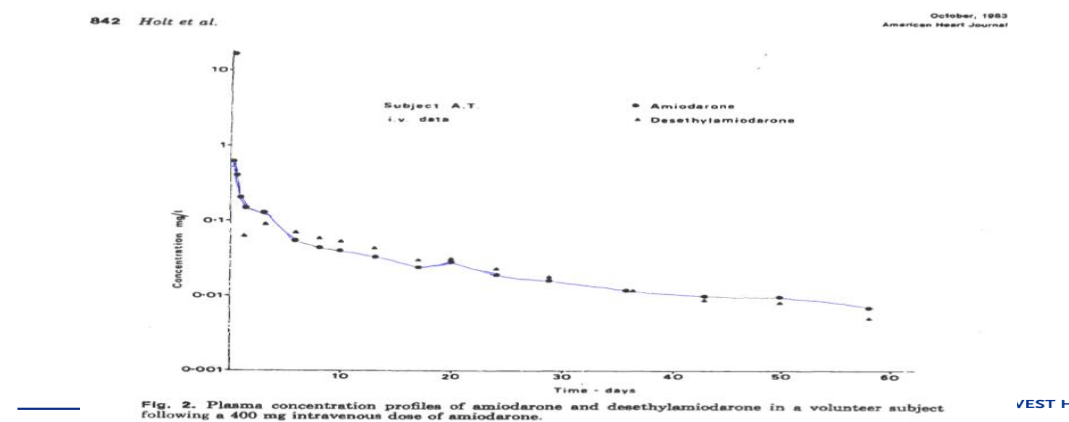
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Purpose

The purposes of this study were :

1. To identify, promote and chart outcomes of interventions due to drug interaction challenges in which patients were treated with Amiodarone.

2. To demonstrate that drug interactions could occur when Amiodarone is administered by IV single dose.

3. To draw up advice for clinical management of potential drug interactions due to treatment with Amiodarone.

Background

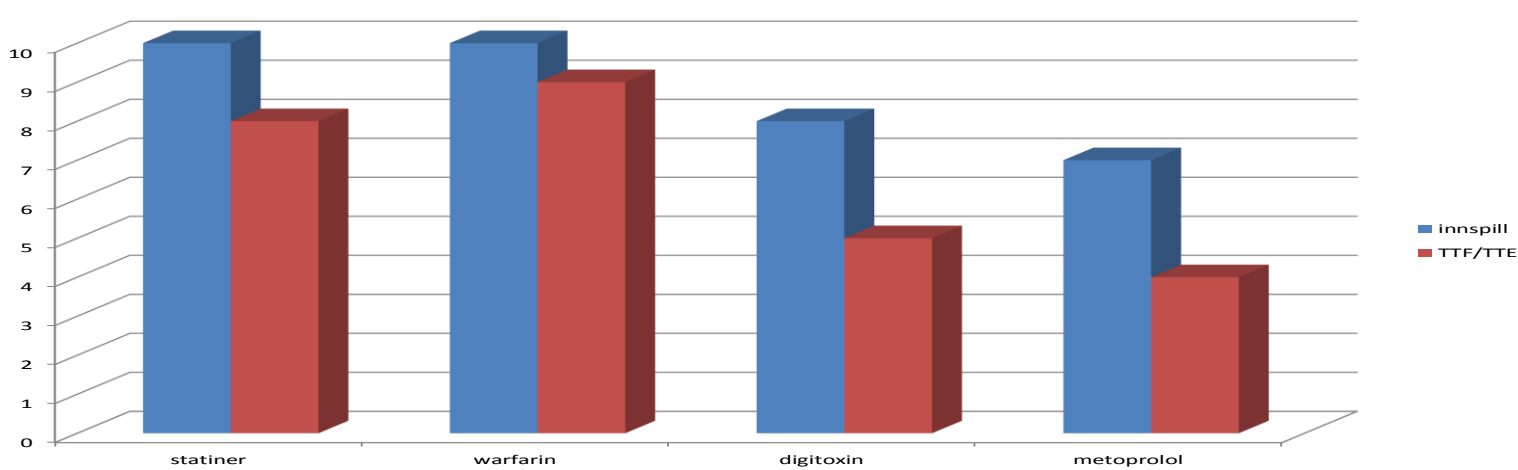The drug Amiodarone has a complex pharmacokinetic profile resulting in a challenge due to drug- drug interactions:

- Substrat of CYP3A4.
- Inhibitor of CYP1A2, CYP2C9, CYP2D6, CYP3A4
- Inhibitor of the transportpump P-glycoproteine (Pgp)
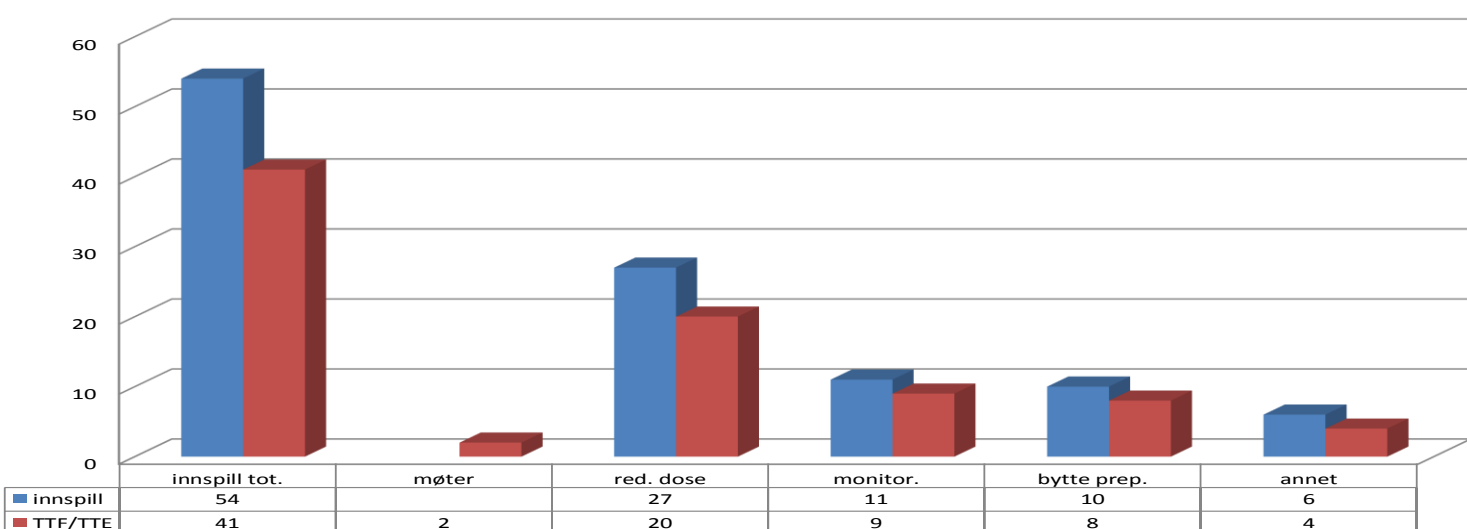- Long T ½ for both drug and active metabolite Desethylamiodarone - even after only IV single dose .

Material - Methods

Including patient:
Amiodarone at admission
Amidarone started at clinic

Structured Medication Rewiev (clinical pharmacist)

Ward Round: suggestions and discussion with doctor

Follow Up patient and chart outcomes

Results

- ➢ 25 patients were included.
- ➢ Pharmacist had 54 inputs in which 41 (72%) were taken into account.
- ➢ 36 different drugs with potential of drug interactions were registered
- ➢ 66% of the inputs involved **four** of the 36 drugs;

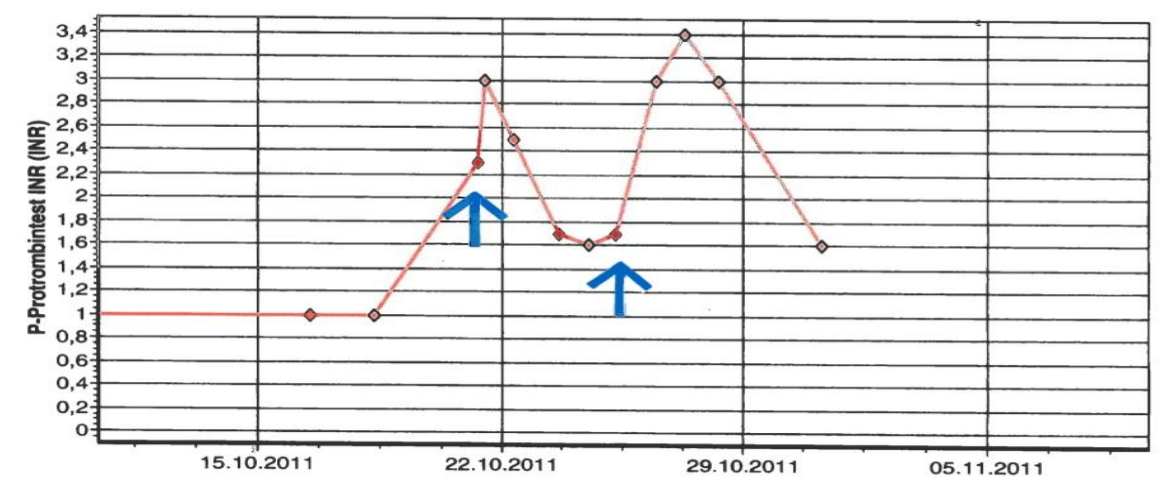 statins, warfarin, metoprolol and digitoxin.

Total number of inputs (blue bar) and outcome (red bar)for Statines, Warfarin, Digitoxin and Metoprolol
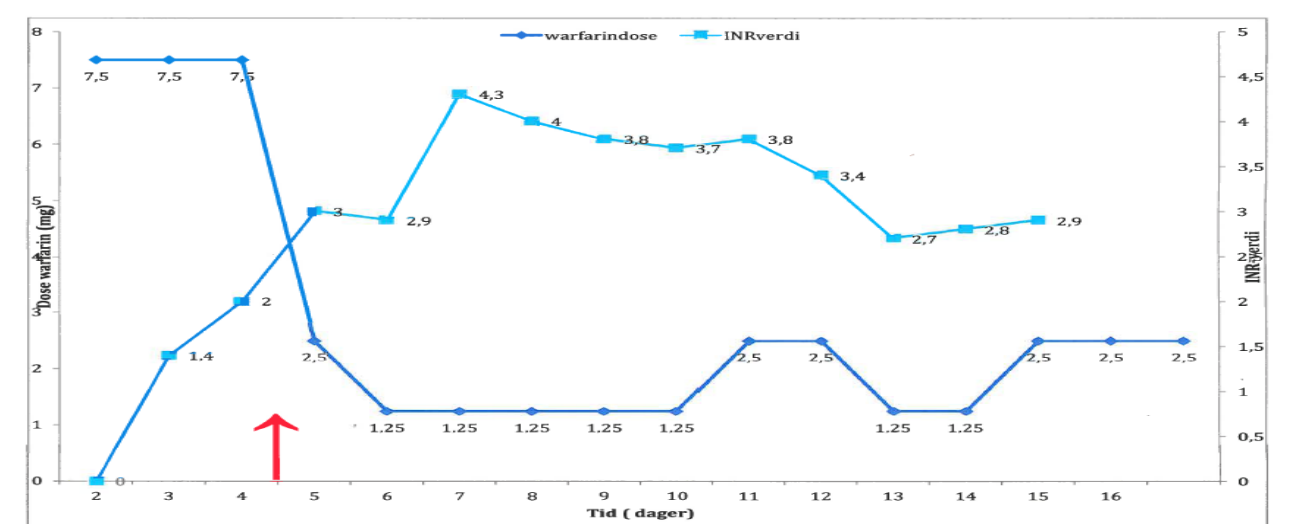
Pharmacist intervention led among other things to meetings, dose reductions, increased monitoring and change of medications

	innspill tot.	møter	red. dose	monitor.	bytte prep.	annet
innspill	54		27	11	10	6
TTF/TTE	41	2	20	9	8	4

Warfarin and Amiodarone IV dose

INR value as a function of time. Two single IV doses of Amiodarone were given to a patient who had been treated with Warfarin.

Patient just started up Warfarin treatment. One single dose Amiodarone IV was given; unstable INR-values resulted in prolonged stay in hospital

Advice for Clinical management of potential drug interactions due to treatment with Amiodarone.

- When patient are admitted from other hospitals and recently are treated with Amodarione, note in medication curve due to long T½
- Warfarin   Reduse to half dose. Follow up INR values!
- Digitoxin,Digoxin   Reduse to half dose
- Simvastatin   Not doses above 20mg or switch to alternative statin
- Atorvastatin   No definite recommendation in literature. Max 40 mg
- Metoprolol   Adjust the dose to bradycardia
- Discharge summeries always explain to GP why it is important to follow up due to treatment with Amiodarone!

Conclusion

The recommendations of further management of DD-interactionsin hospital with Amiodarone was endorced by the lecturer cardiologist

Kvalitetssatsinga
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