

# Effect of Anticoagulant Therapy on Risk for Complications in Cataract Surgery



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Authors have no financial interest in the subject matter of this poster.

# Anticoagulants

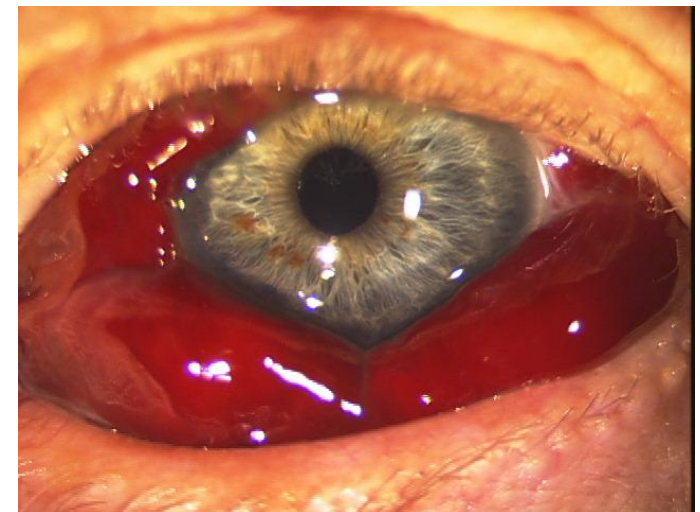
## Purpose of use:

- Prophylaxis of venous thromboembolism
- Relapse prevention of pulmonary embolism
- Prophylaxis of thrombosis and embolism in patients with atrial fibrillation
- Unstable angina pectoris
- Preventing congestion after insertion of artificial heart valves
- Preventing blood clots with prolonged immobilization (immobilized patients, fractures, air travel etc.)



## Bleeding complications in ophthalmology:

- Subconjunctival hemorrhage
- vitreous hemorrhage
- hyphema
- choroidal hemorrhage
- retrobulbar hemorrhage



# Anticoagulants

## Presently used measures to prevent thrombotic complications:

- discontinuation of the drug
- dose reduction
- administration of low molecular weight heparin



## Purpose of the study:

- to verify the thesis if antiplatelet and/or anticoagulant treatment should be modified in patients before cataract surgery

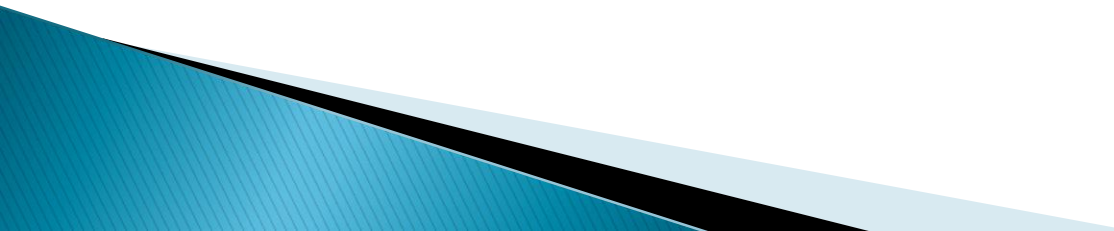
## Methodology:

- PubMed search in years 2007-2012
- prospective and retrospective studies and case reports
- key words: ocular surgery bleeding complications, antiplatelets and cataract surgery

**Tab.1 Risks associated with the use of anticoagulants in cataract surgery in 2007-2012**

Study Author/ Year	No of patients / Eyes	Surgical technique	Antiplatelet use n (%)	Anticoagulants use n (%)	Anticoagulants & Antiplatelet n (%)	Without therapy n (%)	Mean INR	Mean Length of Follow-up	Postoperative incidence of bleeding		
										CG	DG
Barequet et al. 2011	40/51	Phaco	0	0	40 (100)	0(0)	0,8-1,2	7 days	No hemorrhagic complications		
Kobayashi H. 2010	355/558	Phaco	124 (34,9)	39 (10,9)	10 (2,81)	182 (51,2)	1,9	1 month	1.Subconjunctival hemorrhage: 2. Hyphema: 3. Vitreous hemorrhage: 4. Choroidal haemorrhage:	47(27, 1) 0 0 0	31(17, 0 0 0
JD Benzimira et al. 2009	48,852/ND	ND	14,650(29,9 )	2485(5,1)	639(1,3)	31,901(65, 3)	ND	ND	1.Subconjunctival hemorrhage: 2. Hyphema: 3. Vitreous hemorrhage: 4. Choroidal haemorrhage:	274(1, 5) 11(0,0 6) ND 10(0,0 5)	353(1, 1) 14(0,0 4) ND 22(0,0 6)
T.Salam & M.F Raines 2007	16/ND	Phaco/pha cotrab	16(100)	0	0	0	ND	ND	No hemorrhagic complications		
Barquet et al. 2007	63/75	phaco	0	54 (85,7)	9 (14,2)	0	2,03	7 days	1.Intraoperative bleeding: 0 2.Hyphema:1 3.Small iris hemorrhage: 2 4. Small retinal hemorrhage: 1		

## Results:

- in patients with uncomplicated cataract at **high risk for thromboembolic events**, phacoemulsification cataract surgery using a local anesthesia was **safely performed without discontinuing** systemic anticoagulant and antiplatelet treatment
  - microscopic hyphema, small iris hemorrhage, and a small retinal hemorrhage (observed in 1.3%, 2.6%, and 1.3%, respectively) **resolved spontaneously within 1 week** with no compromised visual acuity or ocular sequelae [Barquet et al. J Cataract Refract Surg 2011]
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## Results:

- although the incidence of **subconjunctival hemorrhage** was **significantly greater** in the maintenance group than in the discontinuation group, the hemorrhages were **self-limiting** in both groups [Kobayashi J Cataract Refract Surg 2010]

## **Conclusions:**

**There is no need to modify anticoagulant and/or antiplatelet therapy before cataract surgery.**