

The Pick of Your Peers

Incidence of retinal detachment, macular edema, and ocular hypertension after Neodymium:Yttrium-Aluminium-Garnet Capsulotomy – The French YAG 2 Study

Summary

Postcapsular opacification (PCO) is the most common complication after cataract surgery due to epithelial cell proliferation inside the lens envelope. Purpose of this observational cohort study using a nationwide claims database was to estimate the incidence and assess the risk factors associated with 3 adverse events after Nd:YAG-capsulotomy: ocular hypertension, macular edema and retinal detachment.

Classification

<input type="checkbox"/> Confirmation	<input type="checkbox"/> Interesting Hypothesis
<input type="checkbox"/> Novel Drug Target	<input type="checkbox"/> Controversial
<input type="checkbox"/> Refutation	<input type="checkbox"/> New Finding
<input checked="" type="checkbox"/> Good for Teaching	<input checked="" type="checkbox"/> Decision making in daily practice
<input type="checkbox"/> Technical Advance	

Highlights

- Adverse events occur in 1 of 7 patients (13 %) with- in the first year after YAG-capsulotomy.

- Ocular hypertension (10 %) and macular edema (6 %) were the most frequent adverse events and occur within the first 3 months post procedure.
- Retinal detachment is a rare adverse event (0.5 %) after YAG-capsulotomy.
- Diabetic patients and patients with recent surgery are at higher risk for adverse events occurrence.

Conclusion

The national claims database included data of 6210 patients who received 7958 Nd:YAG-caps procedures. Ocular hypertension and macular edema were the most frequent adverse events of interest post Nd:YAG-capsulotomy, mainly observed within 3 months post-procedure, highlighting the need for a close follow-up during this period or a delayed capsulotomy. Diabetes and an early Nd:YAG-caps after cataract surgery were among the main drivers for adverse events occurrence.

Dot C, Schweitzer C, Labbé A, Lignereux F, Rozot P, Goguillot M, Bugnard F, Brézin AP. Incidence of Retinal Detachment, Macular Edema, and Ocular Hypertension after Neodymium:Yttrium-Aluminum-Garnet Capsulotomy: A Population-Based Nationwide Study-The French YAG 2 Study. *Ophthalmology*. 2023 May;130(5):478-487.

Author of this PP



Dr. Anne-Catherine Karal-Biechl
Oberärztin Augenklinik
UniversitätsSpital Zürich
Rämistrasse 100, 8091 Zürich
ac.biechl@usz.ch

Identified Risk Factors	HR	95% CI	P value	
Influence on any AE occurrence	Time between cataract surgery and YAG*			
	Very early YAG vs. late YAG	1.314	1.034–1.669	0.0256
	Early YAG vs. late YAG	1.349	1.149–1.585	0.0003
	Diabetes at index date (Y/N)	1.448	1.227–1.709	< 0.0001
Influence on OHT/glaucoma occurrence	Time between cataract surgery and YAG*			
	Very early YAG vs. late YAG	1.095	0.807–1.486	0.5602
	Early YAG vs. late YAG	1.429	1.185–1.723	0.0002
	Gender (male vs. female)	1.202	1.011–1.429	0.0372
	Diabetes at index date (Y/N)	1.233	1.005–1.513	0.0448
Influence on ME occurrence	Time between cataract surgery and YAG*			
	Very early YAG vs. late YAG	1.500	1.087–2.070	0.0137
	Early YAG vs. late YAG	1.225	0.967–1.550	0.0925
	Diabetes at index date (Y/N)	1.810	1.446–2.266	< 0.0001

AE = adverse event; CI = confidence interval; HR = hazard ratio; ME = macular edema; OHT = ocular hypertension; YAG = yttrium-aluminum-garnet. Boldface indicates statistical significance.

*Very early Nd:YAG: within the year after cataract surgery; early Nd:YAG: between 1 and 2 years; late Nd:YAG: after 2 years.

Tab. 1 AE ¼ adverse event; CI ¼ confidence interval; HR ¼ hazard ratio; ME ¼ macular edema; OHT ¼ ocular hypertension; YAG ¼ yttrium-aluminum-garnet. Boldface indicates statistical significance. *Very early Nd:YAG: within the year after cataract surgery; early Nd:YAG: between 1 and 2 years; late Nd:YAG: after 2 years. (Elsevier, Permission #5632401050254.)