

Netzhautablösung nach Kataraktoperation bei hoher Myopie

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Hintergrund - Risikofaktoren für Ablatio

Intern: z.B. Myopie, Genetik, Ä.D.

Extern: z.B. Kataraktoperation - Phako 0.32%-1.17%

Kataraktoperation + Myopie?
Kataraktoperation x Myopie?

Böberg-Års G, Viljunen I, Henning V. Retinal detachment after phacoemulsification cataract extraction. J Cataract Refract Surg 2003; 29:1333-1338
Bhagwandin AV, Cheng YF, Wolf RC, et al. Relationship between retinal detachment and isometry in 4262 cataractous eyes. Ophthalmology 2006; 113:643-649
Chen C, Olson KJ. Update on a long-term, prospective study of capsulotomy and retinal detachment rates after cataract surgery. J Cataract Refract Surg 2000; 26:1017-1021
Russell H, Gaskin B, Russell D, et al. Pseudophakic retinal detachment after phacoemulsification cataract surgery: ten year retrospective review. J Cataract Refract Surg 2006; 32:460-465
Sheu SJ, Ger LP, Chen JF. Axial myopia is an extremely significant risk factor for young-aged pseudophakic retinal detachment in Taiwan. Retina 2006; 26:322-327

Methoden

Retinal detachment after phacoemulsification in high myopia: Analysis of 2356 cases

Background: To determine the incidence of retinal detachment in pseudophakic eyes, we conducted a retrospective analysis of 2356 eyes that had undergone phacoemulsification cataract surgery. **Methods:** The phacoemulsification cataract surgery was performed in 2356 eyes of 1519 patients. The mean age was 68.5 years. The mean axial length was 27.1 mm. The mean preoperative refraction was -5.00 D. The mean postoperative refraction was -0.50 D. The mean follow-up time was 10.5 months. **Results:** The incidence of retinal detachment was 0.32% (8/2356) in the pseudophakic eyes. The incidence of retinal detachment was 1.17% (16/1368) in the pseudophakic eyes with high myopia (axial length > 27 mm). **Conclusions:** The incidence of retinal detachment is significantly higher in pseudophakic eyes with high myopia than in pseudophakic eyes without high myopia. The incidence of retinal detachment is significantly higher in pseudophakic eyes with high myopia than in pseudophakic eyes without high myopia.

AXL ≥ 27mm
geplante Phako+IOL



1519 Patienten
2356 Augen

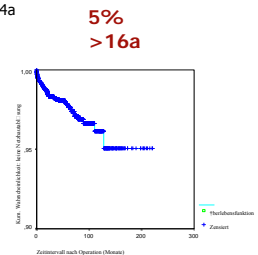
Ergebnisse I - Inzidenz und Follow-up

1.5-2.2% AUGEN

- kein Zusammenhang (n=8): z.B. MF
- fraglich (n=17): z.B. Perf. bei Anästh., t>4a
- wahrscheinlich (n=36)

München: 1.37-2.34% (n=24-41/1745)
Ahaus: 1.96% (n=12/611)

FU: 93.4% > 1a
84% > 2a
69.4% > 3a



Ergebnisse II - Risikofaktoren

- Achsenlänge
Geschlecht
Nd:YAG-Kapsulotomie (43.2%)
Multivariate Analyse Geschlecht, AXL, Alter
Z.n. Ablatio-OP (n=104)
IOL-Art
- + präoperative LK (p=0.002-0.004)
Alter (p=0.02-0.035)

Spontane Ablatio

Wieso?

Haupttrisikofaktor für Ablatio ist die Myopie/Genetik

The Eye Disease Case-Control Study Group. Risk factors for idiopathic rhegmatogenous retinal detachment. Am J Epidemiol 1993; 137: 749-757
Go SJ, Hoyng CB, Klaver CC. Genetic Risk of Rhegmatogenous retinal detachment. Arch Ophthalmol 2005; 123:1237-1241

Wann?

Hinterer Glaskörperabhebung
Der Altersgipfel für HGA Emmetropie 60-70a
Der Altersgipfel für HGA bei Myopie verschiebt sich zu jüngeren Jahren, bei >-8 Dpt zwischen 40-49a

Böhringer H. Statistisches zur Häufigkeit und Risiko der Netzhautablösung. Ophthalmologica 1956; 131: 331-334
Cambiaggi A. Myopia and retinal detachment. Statistical study of some of their relationships Am J Ophthalmol 1964; 58: 642-650
Schepers C., Manden D. Data on the natural history of retinal detachment. Further characterization of certain non-traumatic unilateral cases Am J Ophthalmol 1966; 61: 213-266

Ergebnisse III - Hinweise auf Veranlagung

Bilaterale Ablatio:
 6 Patienten, 5 männl. = 12.8%
 präop. Partnerauge Z. n. Amotio - postop. 12% (n=7/58)

Davison J. Retinal tears and detachments after extracapsular cataract surgery. J Cataract Refract Surg 1980; 14: 624-622
 Cowan P, Fung W, Webster R, et al. The incidence of retinal detachment following extracapsular cataract extraction. A ten year study
 Ophthalmology 1981; 92: 1094-1101
 de Roeth A. Bilateral detachment of the retina. A heredo-familial disease. Arch Ophthalmol 1939; 22: 809-831
 G-S, Hoyta CK, Kawan CC. Genetic Risk of Rhegmatogenous retinal detachment. Arch Ophthalmol 2005; 123:1237-1241
 Delaney W, Daines P. Retinal detachment in the second eye. Arch Ophthalmol 1978; 96: 629-634

Z.n. Ablatio VOR OP: **5.4%**

> 27mm n=114/2464 4.6%
 < 27mm n=12/389 3.0%
 AXL ? n=38/185

Vergleich spontanes Risiko Ablatio

Autor	Anzahl Augen	Definition Myopie	Wahrscheinlichkeit einer Amotio
Curin (1985)	unbekannt	alle Grade	1,0%
Hertel (1903)	16863	alle Grade	1,0%
Bjergvad (1927)	1918	alle Grade	1,2%
Guttman (1902)	1000	>= -6,0 dpt	3,2%
v. Hippel (1900)	1747	>= -10,0 dpt	6,0%
Pierro et al. (1992)	513	>= 24 mm	5,6%
The Eye Disease Case-Control Study Group* (1993)	unbekannt	-3,0 bis -8,0 dpt	10 x häufiger als Emmetrope

Wahrscheinlichkeit	Myopie-Emmetrope	Myopie	Myopie	Myopie	Böhringer H. Statistisches zur Häufigkeit und Risiko der Netzhautablösung. Ophthalmologica 1956;131:331-334
Amotio bis zum Erreichen des 80. Lebensjahres	Myopie bis -1,0 dpt	-2,0 bis -4,0 dpt	-5,0 bis -9,0 dpt	>= -10,0 dpt	
0,01%	0,05%	0,5%	1,1%		
0,01%	0,05%	0,5%	1,1%		
0,02%	0,12%	1,0%	2,0%	6,8%	

Vergleich mit anderen Studien zum Thema

Colin 1999: RLE (mittleres Alter 36.2a), 3 von 4 Ablösungen >5 Jahre postoperativ, männl. Mitte 40

Ripandelli 2003: Augen nicht randomisiert (OP-Gruppe mehr Z.n. LK), hohe Anzahl aphaker Augen, 50% Ablatio auf hinteren Pol beschränkt

Study / Author	Sample Size	Technique	Retinal Tear	Retinal Detachment	Definition of Myopia	Follow-up (years)
Colin 1999	100	Phaco C.R.K.	10	10	< -2.0 mm	Mean 12.7 (range 0-27)
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Zusammenfassung

- Unsere Studie: Ablatio nach OP bei AXL >27mm ca. 2%
- keine Angst vor YAG-Laser
- grösstes Risiko liegt in der Myopie selber
- Keine Erhöhung der Grössenordnung der Ablatio im Verhältnis zur Emmetropie durch Kat.-OP
 - ➔ Risiko Ablatio = Myopie + Kataraktoperation
 - ➔ Risiko Ablatio = Myopie ?