



Cataract surgery in HIV+ patients

Accorinti M., Cecere M., Scala A., Pirraglia M.P.

Dipartimento Organi di Senso, Sapienza Università di Roma, Rome - Italy

Financial interests: none



Purpose: to study the epidemiologic and clinical findings of cataract and the long-term results of cataract surgery in HIV+ patients

Patients & Methods: data from 32 HIV+ patients, 22 males (68.7%), 11 with uveitis or retinitis before surgery and 21 without, with a mean post-op follow-up of 44.9 ± 36.6 months, and those from 114 HIV- patients, 57 with uveitis or retinitis (24 males, 42.1%) with a mean post-op follow-up of 50.1 ± 37.7 months and 57 without (21 males, 36.8%) with a mean post-op follow-up of 46.4 ± 15.2 months, were compared.

Results: **Epidemiology and clinical findings of HIV+ patients with and without uveitis prior to cataract surgery**

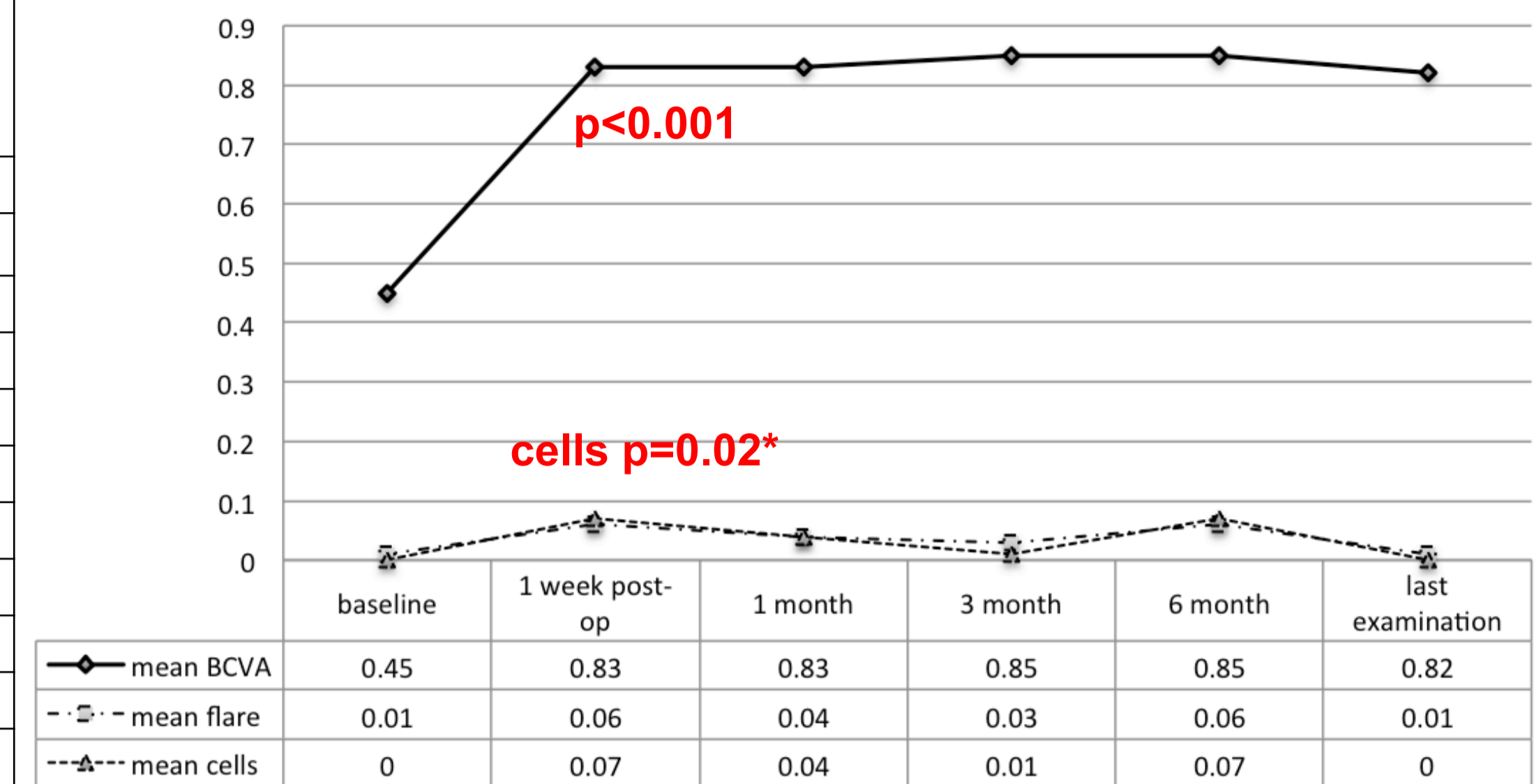
	Patients with uveitis before surgery N° (%)	Patients without uveitis before surgery N° (%)	p
N° patients	11/32	21/32	
N° eyes	11/36	25/36	
Males	6 /11(54.5%)	16/21 (76.19%)	0.027
Females	5/11 (45.4%)	5 /21 (23.8%)	
Mean age at surgery (yrs)	46.73 ± 9.5 (33-63)	58 ± 11.75 (37-74)	0.01
Bilateral cataract	0	4 (19.04%)	0.32
Nuclear cataract (N)	0	6 (24%)	0.19
Cortical cataract (C)	0	1 (4%)	0.67
Posterior subcapsular cataract (PSC)	4 (36.36%)	2 (8%)	0.11
N+C cataract	0	8 (32%)	0.09
C+S cataract	1 (9.1%)	0	0.67
N+PSC cataract	4 (36.36%)	2 (8%)	0.11
N+C+PSC cataract	1 (9.1%)	4 (16%)	0.98
Total cataract	1 (9.1%)	2 (8%)	0.58
Co-morbidities*	5 (45.45%)	17 (80.95%)	0.09

*Co-morbidities including diabetes, hypertension, dyslipidaemia, HBV and HCV infection, TB, zoster infection, pancreatitis, heart lesions, chronic renal failure, thyroid changes, lymphoma, pulmonary lesions and gastrointestinal lesions were equally distributed among groups

Intraoperative and postoperative complications and intraoperative manoeuvres in HIV+ patients with and without uveitis prior to surgery

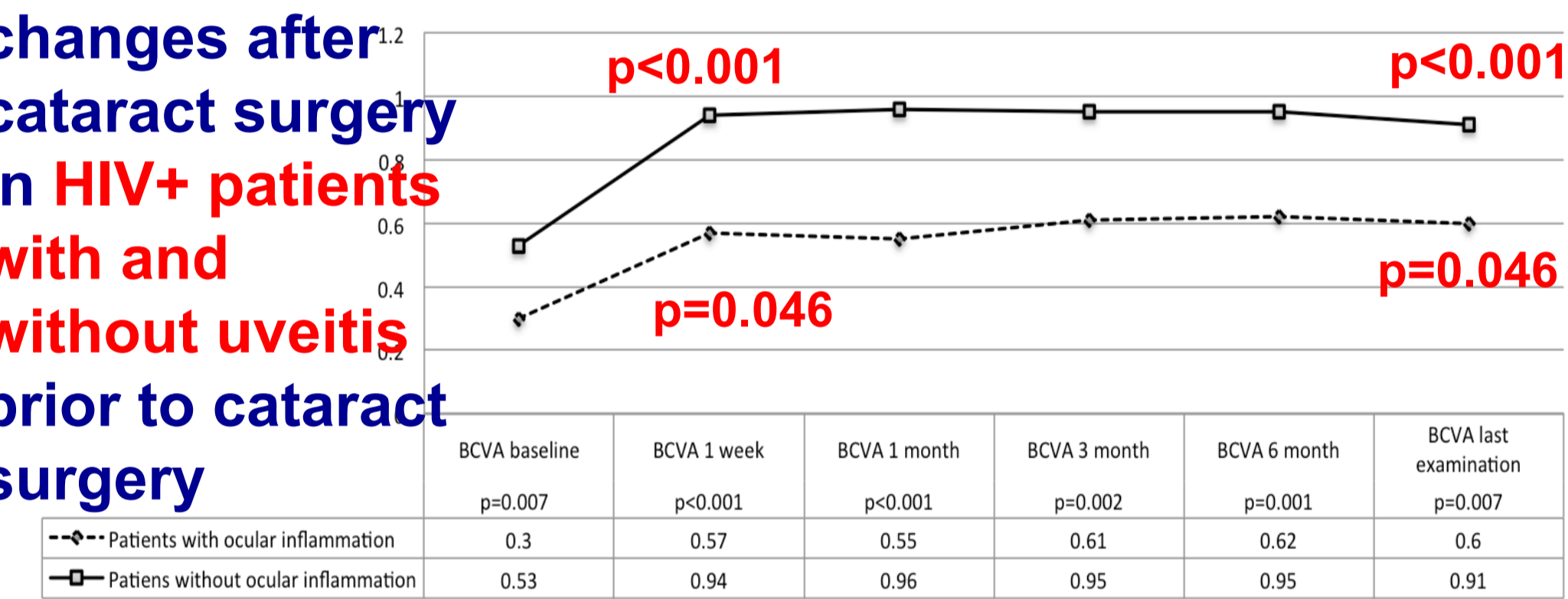
	Patients with uveitis N° eyes (%)	Patients without uveitis N° eyes (%)	p
Phaco+ IOL implantation	11	25	
Intraoperative complications	0	0	
Intraoperative manoeuvres			
- iris hook	2 (18.2)	0	0.16
- trypan blu	1 (9.1)	0	0.67
- synechiotomy	3 (27.3)	0	0.038
- iridectomy	1 (9.1)	0	0.67
- epiliticular membrane removal	1 (9.1)	0	0.67
Postoperative complications	5 (45.4)	4 (16)	0.144
- cystoid macular edema	1 (9.1)	0	0.67
- pupil margin rupture	2 (18.2)	0	0.16
- IOL dislocation	1 (9.1)	0	0.67
- macular pucker	0	1(4)	0.67
- descemet's folds at 1wk	2 (18.2)	1 (4)	0.45
- posterior capsule opacity	2 (18.2)	2 (8)	0.75
- Nd:YAG laser capsulotomy	1 (9.1)	1 (4)	0.86

Mean BCVA, flare and cells in anterior chamber at baseline and during follow-up after cataract surgery in all HIV+ patients

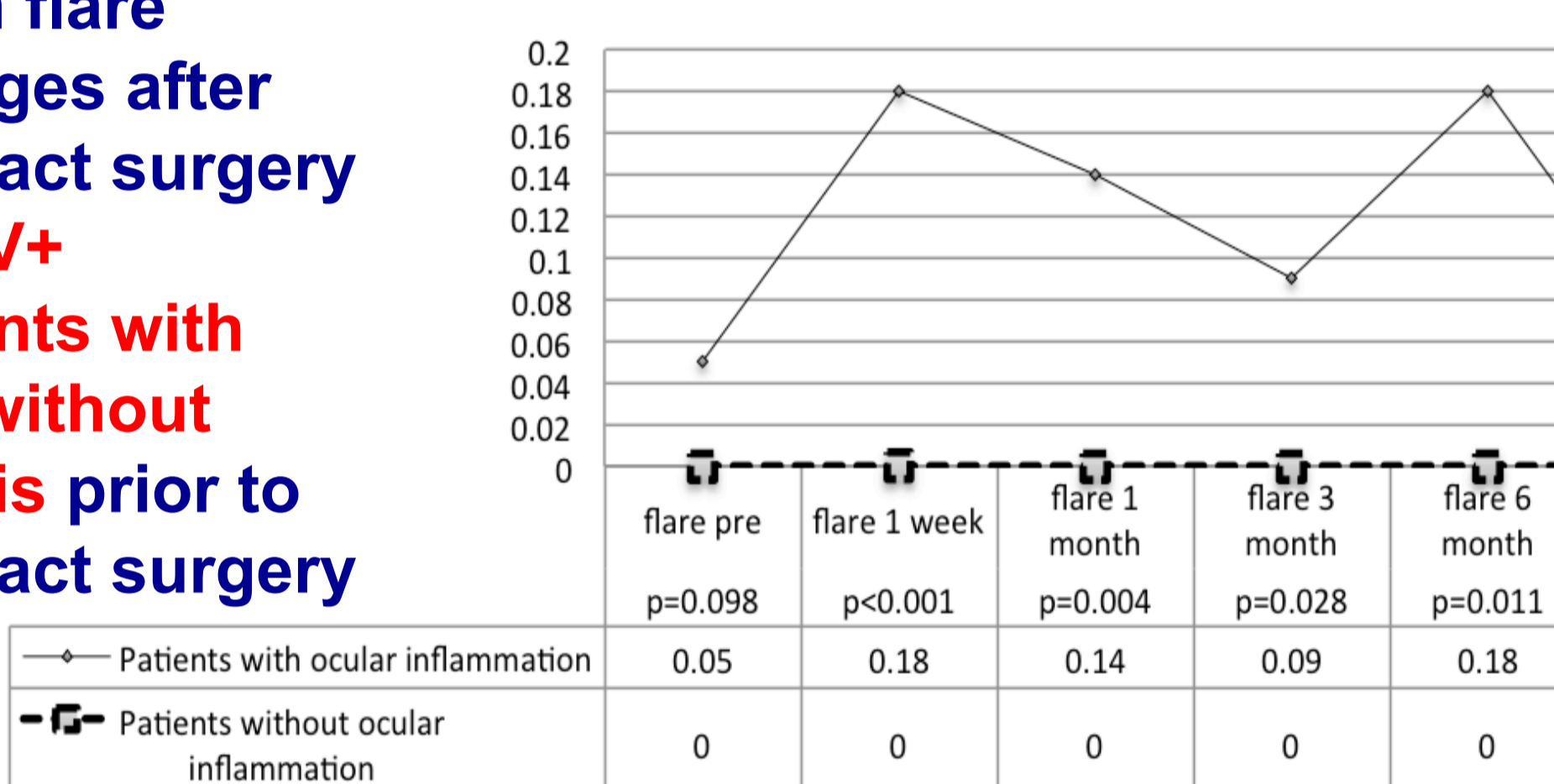


*cells increased significantly at day 7 thereafter returning to baseline values during the follow-up flare did not change significantly from baseline

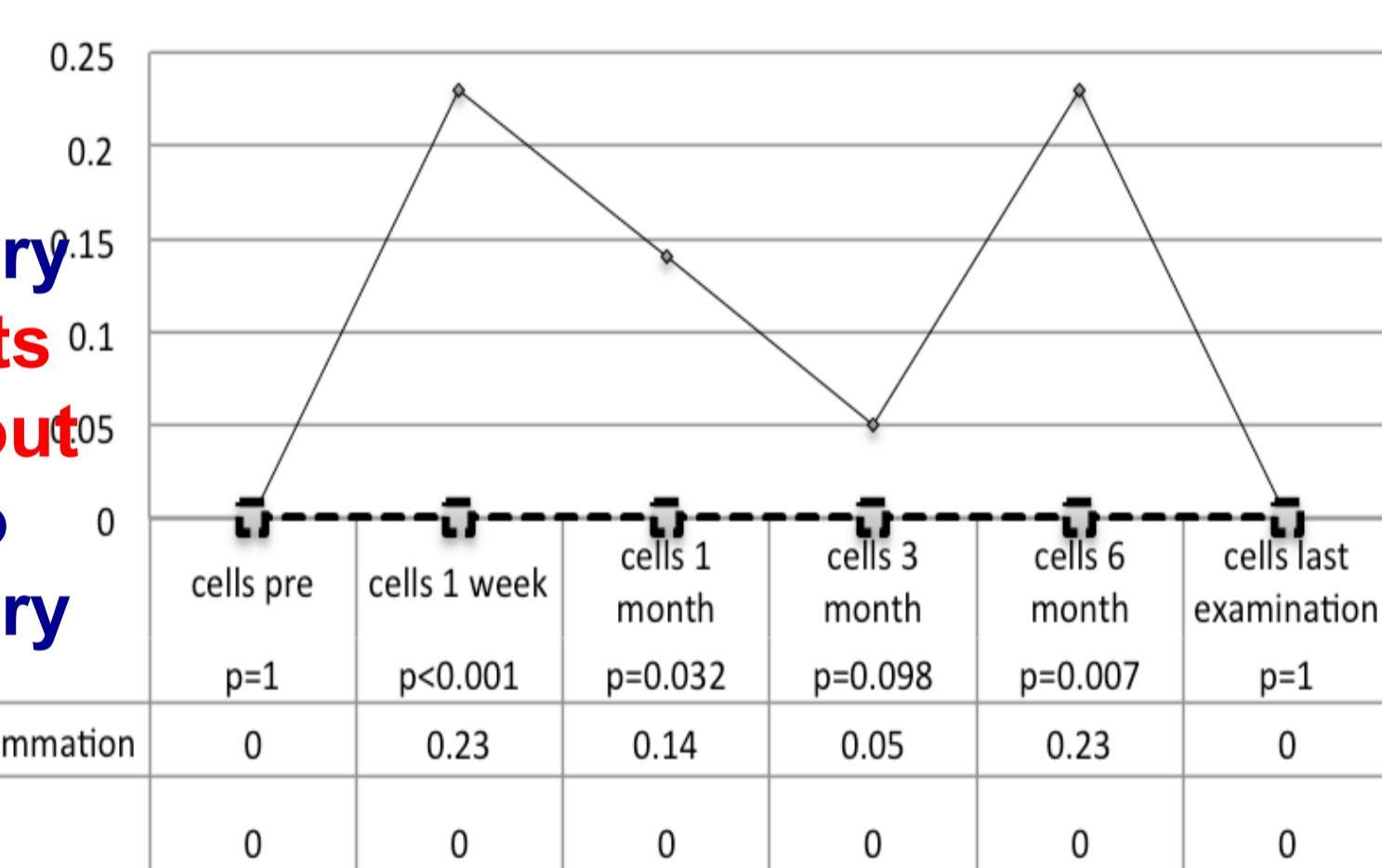
Mean BCVA changes after cataract surgery in HIV+ patients with and without uveitis prior to cataract surgery



Mean flare changes after cataract surgery in HIV+ patients with and without uveitis prior to cataract surgery



Mean cells changes after cataract surgery in HIV+ patients with and without uveitis prior to cataract surgery



Epidemiology and clinical findings of HIV+ and HIV- patients with uveitis prior to cataract surgery

	HIV + patients N (%)	HIV- patients N (%)	p
N° patients	32	57	
N° eyes	36	73	
Male	22 (68.75)	24 (42.1)	0.028
Female	10 (31.25)	33 (57.9)	
Mean age (yrs)	54.1 ± 12.1 (33-74)	51. ± 18.8 (9-82)	0.41
Bilateral cataract	4 (12.5)	15 (26.3)	0.209
Nuclear cataract	6 (16.6)	4 (5.47)	0.121
Cortical cataract	1 (2.7)	0 (0)	0.717
Posterior subcapsular cataract	6 (16.6)	15 (20.5)	0.822
N+C cataract	8 (22.2)	16 (21.9)	0.95
C+S cataract	1 (2.7)	12 (16.4)	0.079
N+S cataract	6 (16.6)	14 (19.2)	0.956
N+C+S cataract	5 (13.8)	8 (10.9)	0.897
Total cataract	3 (8.3)	4 (5.5)	0.876
Co-morbidities*	22 (68.7)	32 (56.1)	0.346
Diabetes	8 (25)	4 (7)	0.039
Dyslipidaemia	13 (40.6)	10 (17.5)	0.033

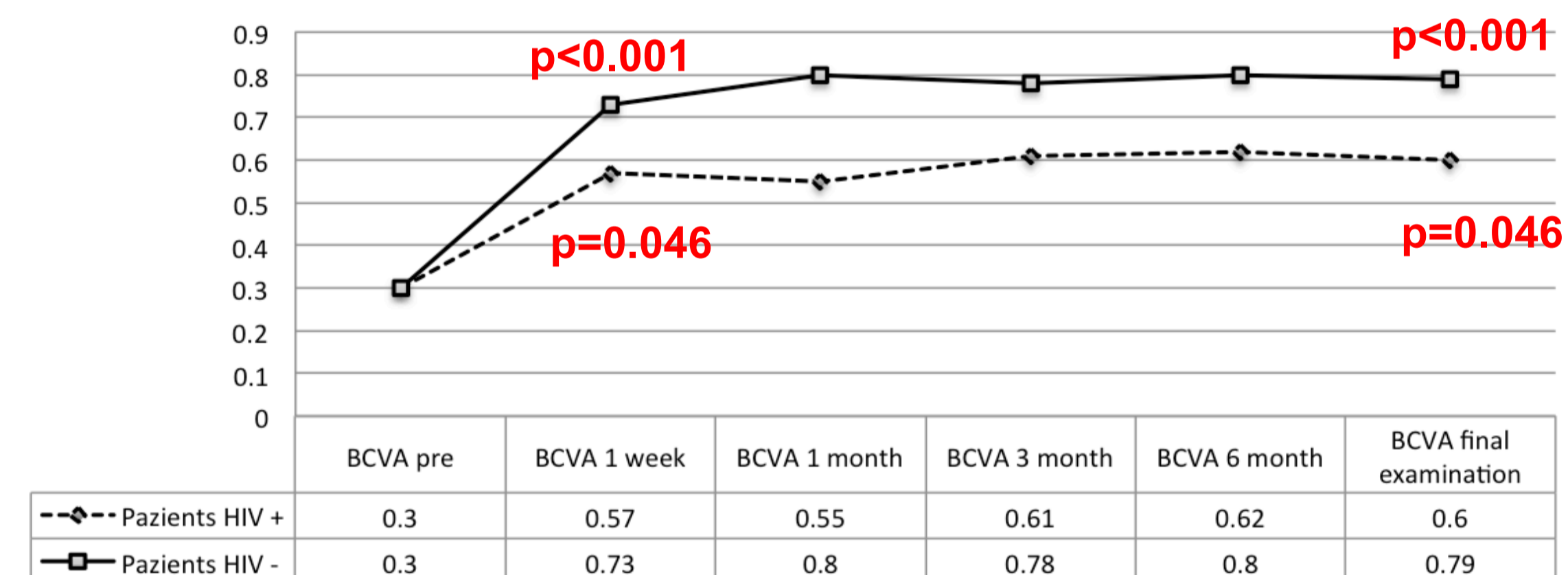
*All the other co-morbidities were equally distributed among groups

Intra- and post-operative complications and intraoperative manoeuvres in HIV+ and HIV- patients with uveitis prior to cataract surgery

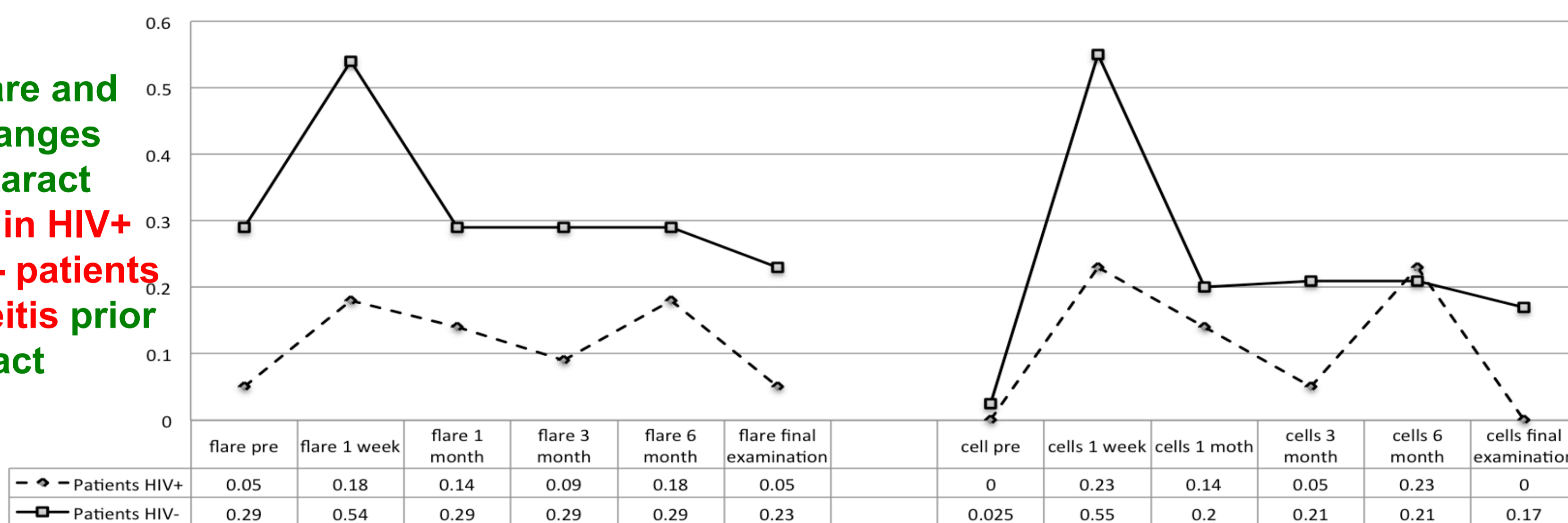
	HIV + patients N° eyes (%)	HIV- patients N° eyes (%)	p
Phaco+ IOL implantation	11	73	
Intraoperative complications	0 (0)	1 (1.36)*	0.271
Intraoperative manoeuvres			
- iris hook	2 (18.2)	26 (35.6)	0.423
- trypan blu	1 (9.1)	21 (28.7)	0.31
- synechiotomy	3 (27.3)	34 (46.6)	0.381
- iridectomy	1 (9.1)	1 (1.4)	0.613
- epiliticular membrane removal	1 (9.1)	1 (1.4)	0.613
Postoperative complications			
- cystoid macular edema	1 (9.1)	9 (12.3)	0.849
- pupil margin rupture	2 (18.2)	26 (35.6)	0.423
- IOL dislocation	1 (9.1)	0	0.271
- macular pucker	0	0	1
- descemet's folds at 1wk	3 (27.3)	8 (10.9)	0.31
- posterior capsule opac.	2 (18.2)	19 (26)	0.852
- Nd:YAG laser capsulotomy	1 (9.1)	13 (17.8)	0.772

*IOL in the sulcus

Mean BCVA changes after cataract surgery in HIV+ and HIV- patients with uveitis prior to cataract surgery



Mean flare and cells changes after cataract surgery in HIV+ and HIV- patients with uveitis prior to cataract surgery



Comparison between HIV+ and HIV- patients without uveitis prior to cataract surgery (25 and 93 eyes, respectively)

- No significant intraoperative or post-operative complications
- Same significant increase of BCVA after surgery (p<0.001)
- HIV + patients showed:
 - 1) male prevalence (76% vs 36%) p= 0.005
 - 2) younger age at surgery (58 vs 69.4 years) p<0.001
 - 3) unilateral cataract (81% vs 36.9%) p=0.001
 - 4) more frequently total cataract (8% vs 0) p=0.06
 - 5) less frequently nuclear + cortical cataract (32% vs 57%) p=0.046
 - 6) more frequently dyslipidaemia (52.4% vs 26.3%) p=0.058
 - 7) more frequently HBV infection (9.5% vs 0%) p=0.037

Comments: HIV+ patients present senile cataract earlier than HIV- subjects and have more associated systemic co-morbidities. Cataract is more frequently found in males, is unilateral, with little differences as concern the type of lens opacity.

HIV+ patients with a diagnosis of uveitis/retinitis before surgery: - are more frequently males and younger than those without uveitis; - have a significant, but lower, increase in BCVA at the end of follow-up; - need more sinechiotomy; - have more inflammation in anterior chamber up to six months, but without differences at the end of follow-up. The course of inflammation in patients with uveitis before surgery is similar in HIV+ and HIV- patients, although HIV- patients present fewer systemic co-morbidities and higher final BCVA. No difference can be found in post-op inflammation and final BCVA in HIV+ and HIV- patients without uveitis/retinitis before surgery.

Conclusions: although HIV+ patients present more associated systemic diseases than HIV- ones, cataract surgery in those patients is safe and useful, independently from the presence of uveitis/retinitis before surgery. Cataract surgery in HIV+ patients allows a significant increase in BCVA, especially in those patients without uveitis/retinitis prior to surgery who are free from preexisting macular and optic nerve damage.