

References

- 1 Kincaid MC, Green WR. Ocular and orbital involvement in leukemia. *Surv Ophthalmol* 1983; **27**: 211–232.
- 2 Schachat AP, Dhaliwal RS. Leukemias and lymphomas. In: Ryan SJ (ed). *Retina*, 2nd ed. CV Mosby: St Louis, 1994, pp 873–890.
- 3 Allen RA, Straatsma BR. Ocular involvement in leukemia and allied disorders. *Arch Ophthalmol* 1961; **66**: 490–508.
- 4 Tang RA, Vila-Coro AA, Wall S, Frankel LS. Case report. Acute leukemia presenting as a retinal pigment epithelium detachment. *Arch Ophthalmol* 1988; **106**: 21–22.
- 5 Stewart MW, Gitter KA, Cohen G. Acute leukemia presenting as a unilateral exudative retinal detachment. *Retina* 1989; **9**: 110–114.
- 6 Vangheluwe O, Ducasse A, Culioli B, Kwong FH, Segal A. Macular manifestations of acute lymphoblastic leukemia. A case report. *Bull Soc Ophthalmol Fr* 1990; **90**: 677–682.
- 7 Fackler TK, Bearely S, Odom T, Fekrat S, Conney MJ. Acute lymphoblastic leukemia presenting as bilateral serous macular detachments. *Retina* 2006; **26**(6): 710–712.
- 8 Malik R, Shah A, Greaney MJ, Dick AD. Bilateral serous macular detachment as a presenting feature of acute lymphoblastic leukemia. *Eur J Ophthalmol* 2005; **15**(2): 284–286.
- 9 Abdallah E, Hajji Z, Mellal Z, Belmekki M, Bencherifa F, Berraho A. Macular serous detachment revealing acute lymphoblastic leukemia. *J Fr Ophthalmol* 2005; **28**(1): 39–44.
- 10 Wu L, Calderón M, Hernández G, Marbis J, Ramírez V. Bilateral exudative retinal detachment as the first sign of relapsing acute myelogenous leukaemia. *Clin Experiment Ophthalmol* 2006; **34**(6): 623–625.
- 11 Miyamoto K, Kashii S, Honda Y. Serous retinal detachment caused by leukemic choroidal infiltration during complete remission. *Br J Ophthalmol* 2000; **84**(11): 1318–1319.

S Golan^{1,2} and M Goldstein^{1,2}

¹Department of Ophthalmology, Tel Aviv Medical Center, Tel Aviv, Israel

²Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
E-mail: shanigol2@walla.com

Eye (2011) **25**, 1375–1378; doi:10.1038/eye.2011.157; published online 1 July 2011

Sir,
Pseudoexfoliative deposits on an intraocular lens implant

Pseudoexfoliation syndrome is the most common identifiable form of secondary open-angle glaucoma worldwide. It is characterized by white powdery deposits at the pupillary margin of the iris and throughout the inner surface of the anterior chamber.¹ We present a case of an 86-year-old gentleman, who presented with pseudoexfoliative material deposited on an intraocular lens implant, a phenomenon widely accepted as rare.²

Case report

An 86-year-old gentleman presented for review of a right-sided cataract. He had a left eye



Figure 1 Colour photograph showing pseudoexfoliative deposits on intraocular lens implant.

phacoemulsification and insertion of posterior intraocular, Akreous Adapt Bausch and Lomb lens (Bausch and Lomb, Kingston upon Thames, UK), in 2004. His post-operative course had been complicated by persistent iritis and cystoid macular oedema, which settled leaving him with a best-corrected visual acuity of 6/9 in that eye, at which point he was discharged. On re-referral for cataract in the right eye, a new finding of bilateral pseudoexfoliation was noted, with pseudoexfoliative plaques growing over the left intraocular implant (Figure 1). His best-corrected visual acuity was 6/12 in the left eye, with his intraocular pressure measuring 24 mm Hg in the left eye and 38 mm Hg in the right. The use of Bimatoprost (Allergan, Marlow, UK) daily in both eyes adequately controlled the intraocular pressures, which were measured at 20 and 16 mm Hg in the right and left eyes respectively, approximately seven weeks after commencing treatment.

Comment

Pseudoexfoliative deposits are known to be found on natural lenses; however, here we present a case of pseudoexfoliation deposits on an intraocular lens implant. It has been suggested that such cases are only infrequently noted as the distance between the posterior iris epithelium, and an intraocular lens is too large to allow deposition of pseudoexfoliation material resulting in these cells passing into the posterior chamber.³ This case is of interest to raise awareness of vigilant examination for pseudoexfoliation, even in pseudophakic patients, where plaques on the lens implant may be the only sign for diagnosis of secondary glaucoma.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Conway RM, Schötzer-Schrehardt U, Kuchle M, Nauman GO. Pseudoexfoliation syndrome: pathological manifestations relevant to intraocular surgery. *Clin Experiment Ophthalmol* 2004; **32**(2): 199–210.

- 2 Park KA, Kee C. Pseudoexfoliative material on the IOL surface and development of glaucoma after cataract surgery in patients with pseudoexfoliation syndrome. *J Cataract Refract Surg* 2007; **33**: 1815–1818.
- 3 Hepsen I, Sbeity Z, Liebmann J, Ritch R. Phakic pattern of exfoliation material on a posterior chamber intraocular lens. *Acta Ophthalmol* 2009; **87**(1): 106–107.

N Kumaran and R Girgis

Department of Ophthalmology, Worthing Hospital,
Worthing, UK
E-mail: neruban@doctors.org.uk

Eye (2011) **25**, 1378–1379; doi:10.1038/eye.2011.159;
published online 1 July 2011

Sir,
**Microbial profile and antibiotic susceptibility
of culture-positive bacterial endophthalmitis**

I read the interesting paper by Melo *et al.*,¹ highlighting the threats posed by bacterial endophthalmitis and the importance of microbiological susceptibility surveillance for its treatment. I would like to share my point of view regarding the concern of increasing antimicrobial resistance arising from this study. As the most important factor to avoid permanent damage of retina is an early appropriate antibiotic therapy, systemic and intravitreal are the preferred route of antibiotic administration for endophthalmitis. Intravitreal injection is a key component of clinical management of exogenous endophthalmitis. It warrants predictable intravitreal levels, especially for hydrophilic antibiotics, such as aminoglycosides, beta-lactams, and glycopeptides, diffusion of which from plasma to vitreous cavity is insufficient to achieve target-site concentration attainment.² However, systemic therapy is required for endogenous endophthalmitis, in which bacteraemia is followed by ocular seeding, to avoid further embolic complications. Pharmacodynamics of conventionally administered systemic antimicrobials show that intravitreal levels vary substantially, but remain below the MIC for many ocular pathogens in most cases. Indeed, very few drugs (mostly lipophilic antibiotics) achieve appropriate concentration within the vitreous cavity, where targeted exposure is required. Inappropriate administration of antimicrobials has been shown not only to worsen clinical outcomes, but also to drive resistance—and meticillin resistance often means quinolone or multidrug resistance.^{2,3} Even if antimicrobial susceptibility testing remains to be of great value for epidemiology and surveillance, optimised management of endogenous endophthalmitis should no longer rely only on static definitions, such as susceptible, intermediate, and resistant,⁴ but requires now the inclusion of pharmacodynamic indices into prophylactic and therapeutic protocols and the integration of different fields of expertise—ophthalmic surgery, infectious diseases, microbiology, and clinical pharmacology—to promote antimicrobial stewardship. Improving patient safety is a multifaceted task requiring multidisciplinary

and organisational commitment.⁵ The appropriate antibiotic, administered to the target site, in the right concentration, in a timely manner could be both one therapeutic challenge and one goal for the future. In my opinion, it would be more worthwhile attempting to improve the management of such a severe infection through demanding, but shared efforts, rather than passively recording a progressive increase of antimicrobial resistance, too often coupled with unsatisfying clinical outcomes.

Conflict of interest

The author declares no conflict of interest.

References

- 1 Melo GB, Bispo PJM, Yu MCZ, Pignatari ACC, Höfling-Lima AL. Microbial profile and antibiotic susceptibility of culture-positive bacterial endophthalmitis. *Eye* 2011; **25**: 382–387.
- 2 Lopez-Cabezas C, Muner DS, Massa MR, Mensa Pueyo JM. Antibiotics in endophthalmitis: microbiological and pharmacokinetic considerations. *Curr Clin Pharmacol* 2010; **5**: 47–54.
- 3 McDonald M, Blondeau JM. Emerging antibiotic resistance in ocular infections and the role of fluoroquinolones. *J Cataract Refract Surg* 2010; **36**: 1588–1598.
- 4 Kowalski RP, Yates KA, Romanowski EG, Karenchak LM, Mah FS, Jerold Gordon Y. An ophthalmologist's guide to understanding antibiotic susceptibility and minimum inhibitory concentration data. *Ophthalmology* 2005; **112**: 1987–1991.
- 5 Kelly SP. Guidance on patient safety in ophthalmology from the Royal College of Ophthalmologists. *Eye* 2009; **23**: 2143–2151.

L Pagani

Antimicrobial Management Program, Bolzano
Central Hospital, Bolzano, Italy
E-mail: leonardo.pagani@asbz.it

Eye (2011) **25**, 1379; doi:10.1038/eye.2011.160;
published online 1 July 2011

Sir,
Spectral domain optical coherence tomography macular cube scans and retinal pigment epithelium/drusen maps may fail to display subretinal drusenoid deposits (reticular pseudodrusen) in eyes with non-neovascular age-related macular degeneration

As subretinal drusenoid deposits, also known as reticular pseudodrusen, carry an increased odds ratio for the development of choroidal neovascularization (2.6),¹ the recognition of this finding is warranted in clinical evaluations of non-neovascular age-related macular degeneration (AMD).

Imaging subretinal drusenoid deposits requires optical coherence tomography (OCT) resolutions adequate to determine the retinal pigment epithelium (RPE) position relative to drusen and OCT algorithms that include subretinal structures. As the low reflectance of retinal tissue limits OCT resolution, subretinal drusenoid deposits are more easily detected with high-resolution