Author's response to reviews

Title: Refractile superficial retinal crystals and chronic retinal detachment: Case Report

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Author’s response to reviews:

Dear Sir

Thank you for reviewing our paper and the reviewers' comments.
In answer to the specific points raised by Dr Brazitikos:

1) We have reviewed both patients and their photographs - the opacities are not confined to the perifoveal area and are distributed over the entire posterior pole - we have amended the manuscript to make this clearer. They are however concentrated at the perifoveal area. We think this is probably secondary to gravity, which would tend to concentrate the crystals posteriorly during sleep. This is similar to the cases seen with chronic exudation when exudates often concentrate subfoveally at the fovea.

2) We agree - refractile opacities are not seen with all longstanding RDs. We do not fully understand why and have not gone into this in detail in the manuscript, which could be the basis for further research and beyond the scope of this short case report. However we believe there are a number of possible explanations:

- All the cases we have seen, and most described by other authors, have had retinal dialyses. As we postulate in the discussion this could be secondary to melanin metabolism from liberated pigment which would be greater in traumatic dialysis cases
- Crystal deposition may be enhanced by precipitating on the interface of an attached posterior hyaloid face with the retina as opposed to a case with a PVD where no such interface would exist
- The larger area of retinal incontinuity associated with a retinal dialysis as opposed to longstanding retinal detachments with small round retinal holes may lead to a greater exchange of subretinal fluid with the vitreous cavity and hence greater potential transfer of subretinal fluid products to the vitreous and subsequent precipitation on the retina
- Unknown individual differences in retinal metabolism

As stated in the manuscript the fellow eyes were normal in both cases and we believe the posterior pole opacities are secondary to the retinal detachment as others have reported. There were no features of other known crystalline retinopathies in either patient and no suggestive history of conditions associated with these e.g. canthaxanthin or nitrofurantoin use etc

We hope this clarifies the points raised and have amended the manuscript and abstract to make this clearer we feel

Yours faithfully