

## Unilateral Anterior Capsular Contraction Syndrome Following Bilateral Cataract Surgery in a Patient With Pseudoexfoliation Syndrome: A Case Report

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### ABSTRACT

**Purpose:** To report a case of unilateral anterior capsular contraction syndrome (ACCS) occurring after bilateral cataract surgery in a patient with bilateral pseudoexfoliation syndrome.

A 65-year-old male patient underwent sequential cataract surgery. Both eyes presented pseudoexfoliation syndrome. The first eye had an uneventful postoperative course. The second eye, characterized by poor pupillary dilation requiring mechanical stretching without iris expansion devices and a relatively small capsulorhexis, developed anterior capsulophimosis two months after surgery.

**Conclusion:** ACCS is multifactorial. Pseudoexfoliation-related zonular weakness combined with surgical factors such as inadequate dilation and small capsulorhexis size may contribute to its development.

### INTRODUCTION

Anterior capsular contraction syndrome (ACCS), also known as anterior capsulophimosis, is an uncommon complication of cataract surgery characterized by progressive fibrosis and shrinkage of the anterior capsulorhexis opening. Since its description by Davison, several risk factors have been reported including pseudoexfoliation syndrome, zonular weakness, inflammation and small capsulorhexis size [1,2].

Pseudoexfoliation syndrome remains a major risk factor due to zonular instability and poor pupillary dilation [3]. We report an asymmetric occurrence of ACCS after bilateral cataract surgery in a patient with bilateral pseudoexfoliation syndrome.

## CASE REPORT

A 65-year-old man presented with bilateral cataract associated with bilateral pseudoexfoliation syndrome and insufficient pharmacological dilation.

The first eye underwent uneventful phacoemulsification with in-the-bag intraocular lens implantation. Postoperative evolution was favorable without capsular contraction.

The fellow eye showed similar pseudoexfoliation and poor dilation. Mechanical pupil stretching was performed without iris hooks or pupil expansion ring. Because of limited exposure, the capsulorhexis was relatively small. Surgery was completed successfully with in-the-bag IOL implantation.

Two months later, examination revealed marked contraction of the anterior capsulorhexis with fibrotic anterior capsule changes, confirming ACCS was removed with YAG laser and the visual acuity increased to 9/10.

## DISCUSSION

ACCS results from proliferation and fibrotic transformation of residual lens epithelial cells into contractile myofibroblasts causing progressive centripetal contraction of the capsular opening [2].

Hayashi et al. demonstrated increased anterior capsule contraction in eyes with pseudoexfoliation syndrome compared with normal eyes [3]. This is mainly explained by zonular weakness and increased postoperative inflammatory response.

Our case is notable because pseudoexfoliation was bilateral but capsulophimoses occurred only in one eye, suggesting that additional factors influence the development of ACCS.

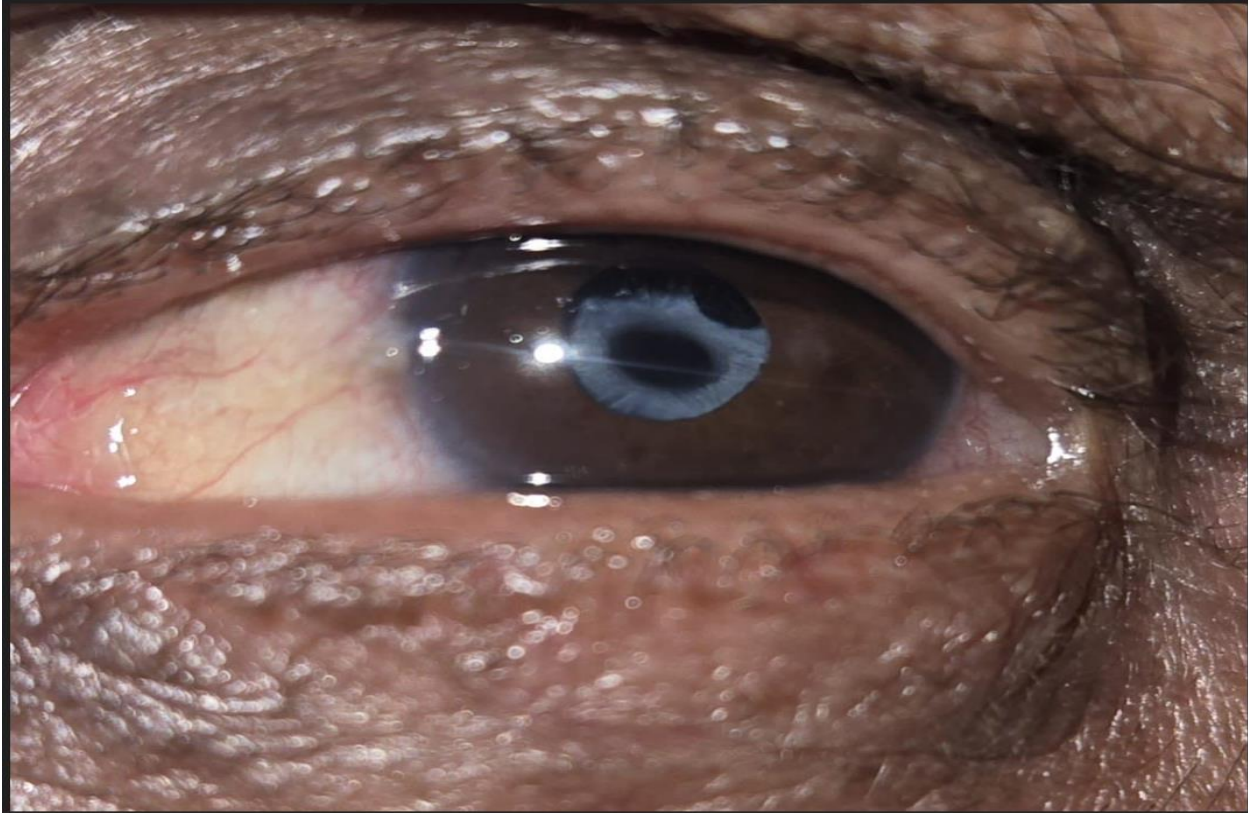
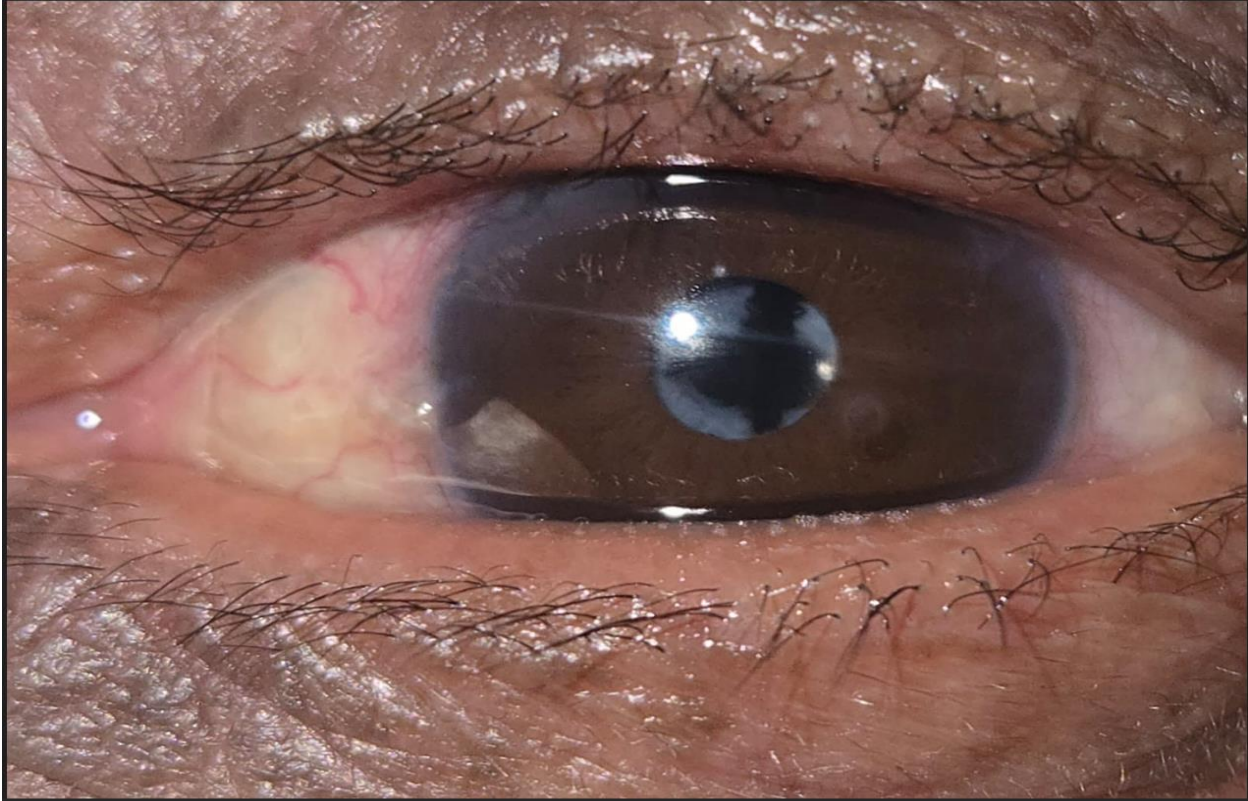
Poor dilation during the second surgery required pupil stretching without expansion devices. Although surgery was uncomplicated, limited visualization contributed to a smaller capsulorhexis. Joo et al. showed that smaller capsular openings are associated with greater postoperative contraction [4].

The combination of pseudoexfoliation, zonular fragility, poor mydriasis and reduced capsulorhexis size probably explains the unilateral occurrence.

In high-risk eyes, adequate capsulorhexis size, pupil expansion devices and capsular tension rings when needed may reduce the risk. Nd: YAG relaxing anterior capsulotomy is effective in early stages [5].

## CONCLUSION

This case highlights the multifactorial origin of ACCS. Even with bilateral pseudoexfoliation, postoperative evolution may differ between eyes. Surgical factors, particularly pupil management and capsulorhexis size, play an important role in preventing capsular contraction.





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