



# Atypical Presentation of *C. Acnes* Endophthalmitis

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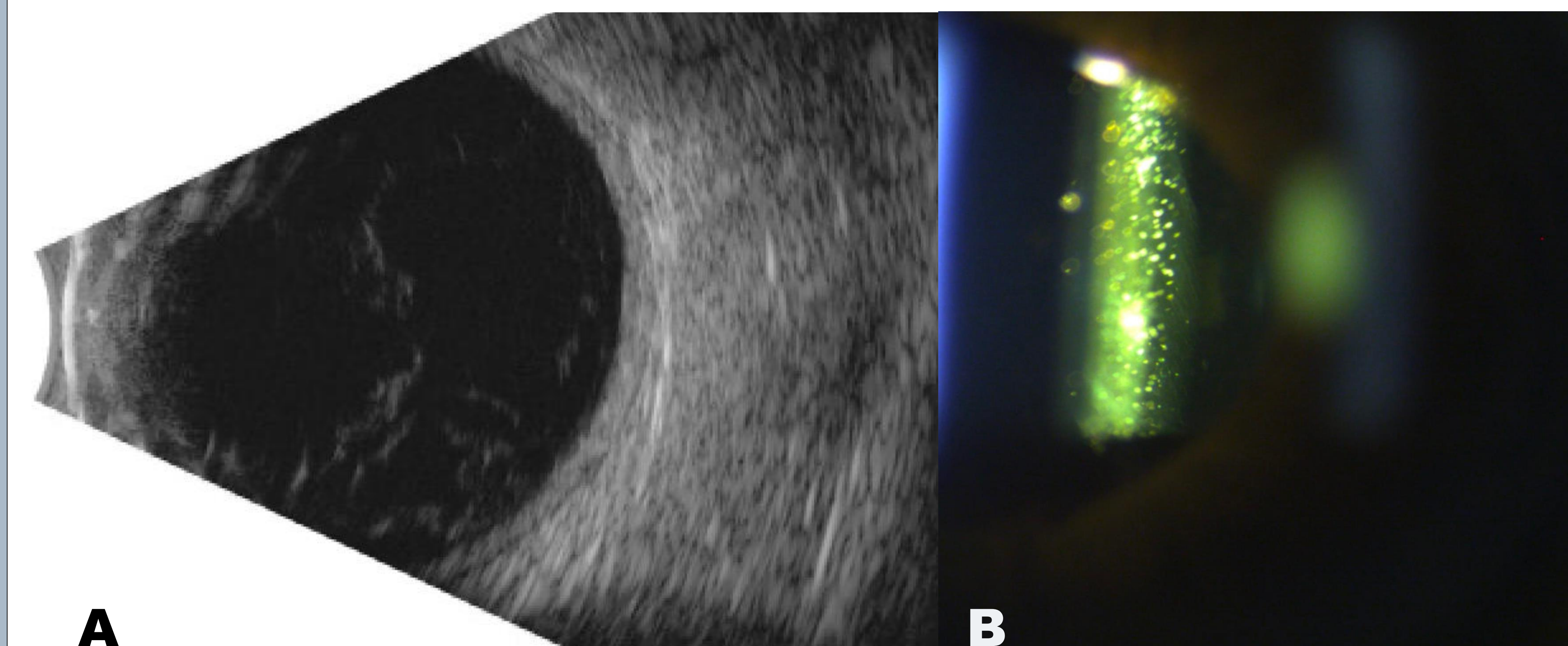
## INTRODUCTION

- *Cutibacterium acnes* (*C. acnes*), previously known as *Propionibacterium acnes*, is considered the most likely causative agent of chronic postoperative endophthalmitis
- *C. acnes* is an anaerobic bacterium which classically presents months after surgery as indolent, smoldering inflammation.
- This differs from acute endophthalmitis which presents as raging inflammation usually within 1 week of ocular surgery.

## CASE PRESENTATION

- 59 year-old male presents on POD4 after CEIOL with evidence of acute endophthalmitis.
- He underwent intravitreal injection of vancomycin and ceftazidime. Over the course of ~ 2 months the patient's topical steroids were tapered and ultimately BCVA was 20/60+.
- 3 months post-op, the patient presented with evidence of recurrent endophthalmitis.
- Culture from the vitreous tap grew *C. acnes*, suggesting that the patient had post-operative acute endophthalmitis by *C. acnes* in addition to recurrent chronic endophthalmitis.

## IMAGING



Figures: A. B-scan taken on POD4 demonstrating vitritis and evidence of acute endophthalmitis. The patient subsequently received intravitreal injections of vancomycin and ceftazidime as well as topical therapy including antibiotics and steroids. B. Slit lamp image demonstrating anterior vitreous cell clumping. This image was taken 7 weeks after the patient was diagnosed with recurrent *C. acnes* endophthalmitis.

## DISCUSSION

- *C. acnes* classically presents as a chronic endophthalmitis. Given the slow growth of this bacteria and ability to sequester on the lens capsule, *C. acnes* rarely presents as acute endophthalmitis. The majority of cases of acute endophthalmitis by *C. acnes* occurred after penetrating injury or infected filtering bleb. In these cases, the presentation is similar to that of staphylococcus endophthalmitis<sup>1-2</sup>.
- The examination of *C. acnes* typically involves a peripheral white plaque within the capsular bag, which our patient did not present with acutely nor during his recurrent episode.
- The patient's medication compliance was poor, including difficulty with antibiotic and steroid drops immediately post-operatively as well as with continuing on the suggested regimen while in the acute and recurrent endophthalmitis phase; both of which could have contributed to the inflammatory course.

## CONCLUSION

- Though *C. acnes* typically presents as chronic post-operative endophthalmitis, physicians must be aware that acute presentation is also possible.
- The key clinical feature of chronic endophthalmitis caused by *C. acnes* is a white, intracapsular plaque, which is not present in acute endophthalmitis.
- Strongly consider tap and inject in all cases of endophthalmitis, despite timeline.
- In cases of recurrent endophthalmitis, be strongly suspicious of *C. acnes* as the causative agent.
- Encourage strict adherence to topical therapy regimen and encourage patients to return immediately if pain/vision worsens post-operatively.

## REFERENCES

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