Rare case of dacryocystitis caused by anaerobic bacteria in the newborn

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Learning Points

- Neonatal dacryocystitis is a rare clinical entity often in the setting of congenital nasolacrimal duct obstruction.
- Most commonly implicated organisms include *Streptococcus pneumonia, Streptococcus mitis, Haemophilus influenza* and *Staphylococcus aureus*.
- We present a case of infantile dacryocystitis caused by unusual polymicrobial infection.

Case Report

- 6-week-old full term healthy female presented to the ED with 3-days of worsening left eyelid edema, green discharge, and fever (Fig.1).
- Patient was admitted for broad-spectrum antibiotics. Despite 24 hours on IV antibiotics, symptoms failed to improve.
- She underwent nasolacrimal probing under general anesthesia, during which copious purulent drainage was observed and samples were collected for cultures.
- At post operative day 1 patient had marked improvement (Fig 2). Cultures grew *Serratia marcescens, Haemophilus aphrophilus* and later grew *Prevotella intermedia.*
- Antibiotic regimen was adjusted to amoxicillin-clavulanic acid and trimethoprim-sulfamethoxazole.
- At 6-month follow-up: the patient's mother reported that she was doing well with no recurrence of symptoms.

Fig.1 Left eye periorbital edema, purulent discharge from the lower punctum, and erythema over the nasolacrimal area.

Fig.2 Post-operative day 1 with marked improvement of erythema and edema. There is no discharge from compression of the lacrimal sac.

Discussion

- We report a case of infantile acute dacryocystitis caused by three rare pathogens:
  - *Haemophilus aphrophilus is* a gram-negative rod, normal component of oral flora.
  - *Prevotella intermedia* a gram-negative anaerobe, normal oral, vaginal, gastrointestinal, and skin flora.
  - *Serratia marcescens* a gram-negative bacillus that occurs naturally in soil and is associated with nosocomial infections.
- There are only 2 other case reports with isolated *Prevotella intermedia* and *Serratia marcescens* in pediatric dacryocystitis. No case of *Haemophilus aphrophilus* causing infantile or pediatric dacryocystitis has been reported.
- This is an unusual case of infantile acute dacryocystitis caused by polymicrobial anaerobic bacteria.
- The case highlights the importance of considering unusual pathogens in the treatment of infantile dacryocystitis.

Conclusion

- Prompt recognition and appropriate management are crucial to prevent complications such as orbital cellulitis and abscess formation.

References

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