Audit of the management of paediatric orbital and preseptal cellulitis and the role of specialist input in line with published guidelines

Yasmin M.C Cabdi*, Youssra Al Hajji*, V Kadaba, T Kipioti

*joint 1st author

UNIVERSITY OF BIRMINGHAM

NHS University Hospitals Birmingham NHS Foundation Trust

BACKGROUND

Orbital and preseptal cellulitis are bacterial infections of the periocular area that are more common in the paediatric population. They have the potential for serious long-term consequences if not managed appropriately[1] .

AIMS

- Measure the incidence of paediatric orbital/pre-septal cellulitis
- Measure the compliance of management in accordance with the local guidelines
- Identify the timepoints of specialist (ophthalmology/ENT) input
- Measure length of stay and outcome of stay

METHODS

Setting — Good Hope Hospital, Heartlands Hospital and Solihull Hospital between Jan 2020 and Aug 2022

Patients — 44 paediatric patients who presented to A&E with suspected orbital or preseptal cellulitis

Collection — Retrospective analysis. Data collected from paper notes and digital computer notes

Analysis — Data analysed using Excel spreadsheets

RESULTS

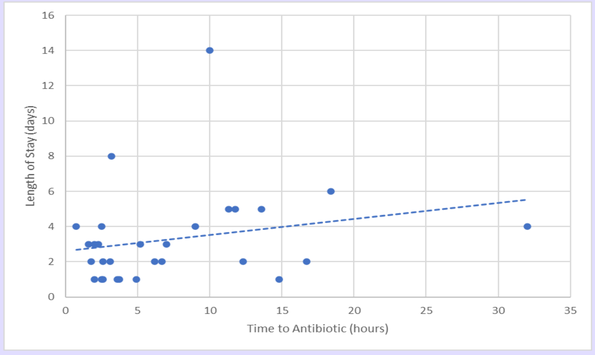


Figure 1: The trend between time to IV antibiotic administration (hours) and length of stay (days).

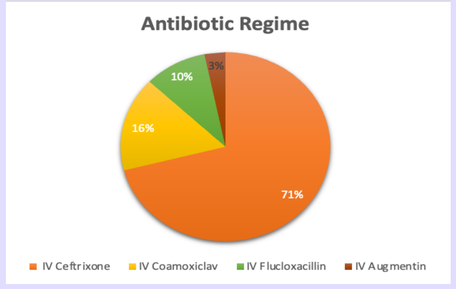


Figure 2: Compliance to 1st line IV antibiotic.

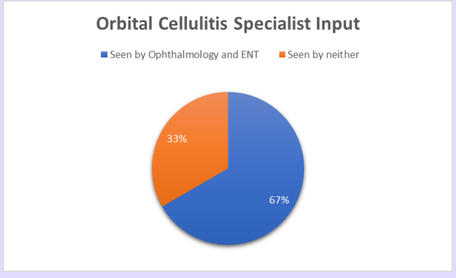
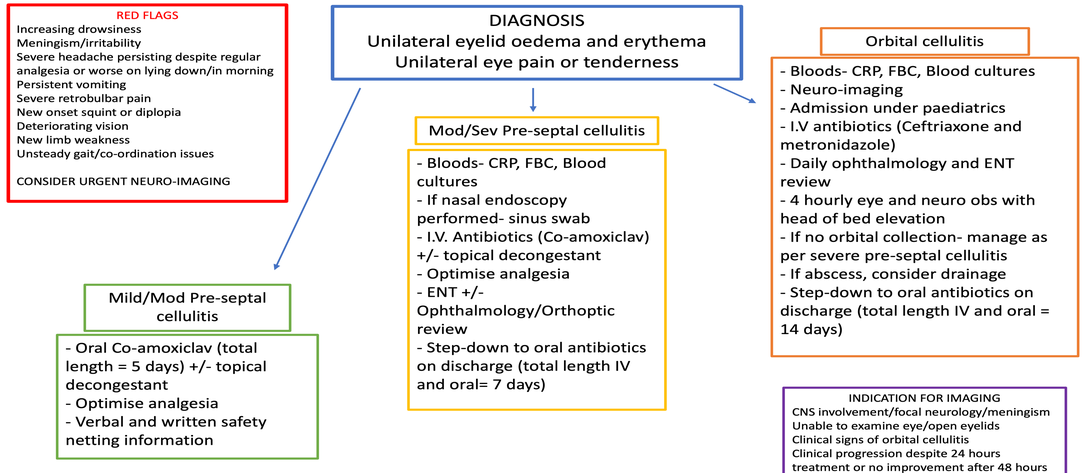


Figure 3: The role of specialist input for orbital cellulitis patients.



DISCUSSION AND CONCLUSION

- Poor compliance to IV antibiotic administration with only 71% of patients receiving first line antibiotics
- Heterogeneity in time of administration of antibiotics. Trend associated with increased hospital stay
- CT scans used appropriately
- 50% of orbital cellulitis patients not reviewed by ENT within 24 hours
- 50% of patients diagnosed with orbital cellulitis were seen by an ophthalmologist within 24 hours, and 33% were not reviewed at all
- 50% of the patients with orbital cellulitis were followed up in ophthalmology clinic

RECOMMENDATIONS

- Provide clear diagnostic criteria for clinically differentiating preseptal from orbital cellulitis
- Specify a target for time to antibiotic
- Specify the time-frame for ‘urgent ENT review’
- Clear guidance on what factors warrant an ophthalmology referral/ who can review (e.g., orthoptics)
- Consider extending the total antibiotic regime (intravenous + oral antibiotics) to 14 days for orbital cellulitis in line with microbiology advice

Reference: Kipioti, T. Preseptal and Orbital cellulitis in Children. [internet] University Hospitals Birmingham. Local Trust Guidelines. [cited 2023.04.24].