A review of UK orbital cellulitis management and guideline development

Introduction

Periorbital cellulitis is an acute infection of the soft tissues that is subdivided anatomically^{1,2}.

- ❖ Pre-septal cellulitis - commonly caused by skin infection, trauma or dacryocystitis.
- ❖ Post-septal cellulitis - commonly results in microbe spread from acute sinusitis.
 - ❖ Abscess formation may cause visual loss.
 - ❖ Posterior spread may cause cavernous sinus thrombosis or intracranial infection.
- ❖ Effective management of periorbital cellulitis depends upon:
 - ❖ Prompt diagnosis
 - ❖ Aggressive antimicrobial therapy
 - ❖ Multidisciplinary input between ophthalmologists, otolaryngologists and paediatricians (depending on age).
- ❖ Therefore, effective guidelines have the potential to maximise patient outcomes.

Aims

- ❖ This study analyses orbital cellulitis guidelines used by otolaryngologists across the UK.

Methods

- ❖ 51 acute admitting otolaryngology units across the UK were contacted for their orbital cellulitis guidance. These were then analysed & compared to published evidence.

Results

- ❖ 23/51 (45.1%) units had available guidelines for periorbital cellulitis.
- ❖ 18 (78.3%) obtained in total
 - ❖ 17 PDF
 - ❖ 1 Mobile Application

Marked variation in terms of:

- ❖ Baseline investigations
- ❖ Microbiology sampling
- ❖ Use of Medical adjuncts
- ❖ Criteria for admission
- ❖ Criteria for imaging
- ❖ Indications for surgery
- ❖ Follow up

- ❖ The results were analysed to develop an updated multi-specialty guideline for Newcastle upon Tyne. This has subsequently been accepted by ENT UK as a clinical guideline.

<https://www.entuk.org/members/guidelines>

References

1. Baring and Hilmi, An evidence based review of periorbital cellulitis. Clin Otolaryngol, 2011. 36(1): p. 57-64.
2. Fokkens et al. European position paper on rhinosinusitis and nasal polyps. Rhinology, 2012. 50(1): p. 1-12.
3. Okonkwo A, Powell S, Carrie S & Ball SL. A review of periorbital cellulitis protocols in the United Kingdom. Clinical Otolaryngology. 2017 Oct 20.

Figure 1 - Units Contacted (pointer=tertiary care centres; circle= secondary care centres)

First Line Antibiotics for Periorbital Cellulitis

Figure 2 - First Line Antibiotics

Figure 3 - Imaging Modality

Conclusion

- ❖ Less than half of units contacted had available formal guidance for a sight threatening emergency.
- ❖ Areas for improvement were principally anaerobic cover and imaging³.
- ❖ We have now updated our patient pathway with input from ophthalmology, paediatrics, microbiology and infectious diseases.
- ❖ The patient outcomes will subsequently be audited.

Figure 4 - Patient pathway developed