CHALLENGES AND SOLUTIONS IN THE MANAGEMENT OF ORBITAL FRACTURES IN THE EMERGENCY DEPARTMENT AT DERRIFORD HOSPITAL

AUTHORS: MARIANA BOSOV, KONRAD SKORKO
ORAL AND MAXILLOFACIAL DEPARTMENT, DERRIFORD HOSPITAL, PLYMOUTH, UK

INTRODUCTION

- Considering recent cases within Derriford Hospital, Plymouth, highlighting the importance of good orbital injury assessment we have reflected upon our current practices
- Traumatic orbital emergencies require rapid diagnosis, accurate documentation of visual and orbital functions, and in certain cases, urgent intervention to prevent permanent loss of vision or intractable diplopia
- Retrobulbar hemorrhage causes a rapid rise in infraorbital volume and pressure, reducing retinal and optic nerve blood flow.
- Unless urgently decompressed, ischemia can rapidly lead to retinal infraction and complete blindness

OBJECTIVES

- Improve patient safety by evaluation of patient assessment when attending Emergency Department(ED) and the escalation/monitoring plan set in place by the attending OMF surgeon
- Standard: to achieve 100% on documentation of injuries, including acuity, pupil level, paresthesia / anesthesia or their lack of, proptosis, diagnosis (SOP FOR UHP)
- Formulated based upon the results to ensure standards are being met

Material and method

- First audit cycle: retrospective, patient cohort from the last 6 months of discharges (July to December 2019) from the Emergency Department where OMFS has been involved

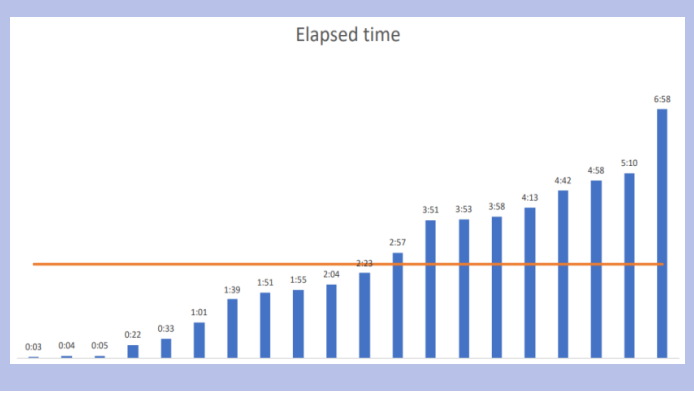
  Sample Size: 22
- Second audit cycle: prospective, following delivery of recommendation, discharges from June to September 2020

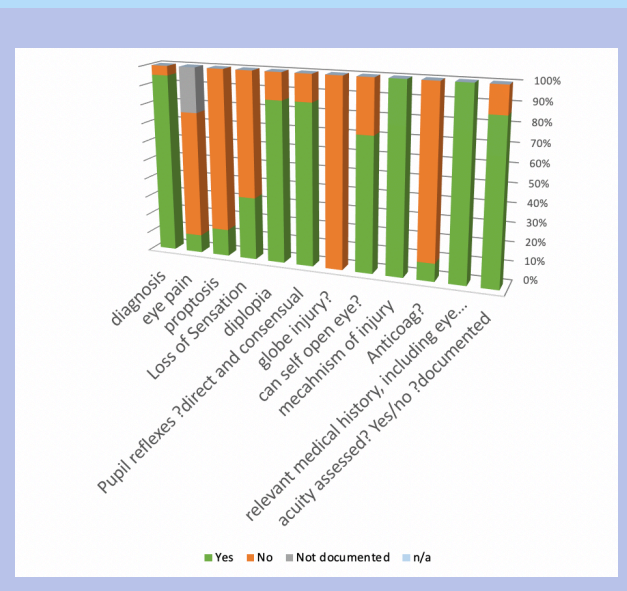
  Sample size:18

RESULTS

FIRST CYCLE

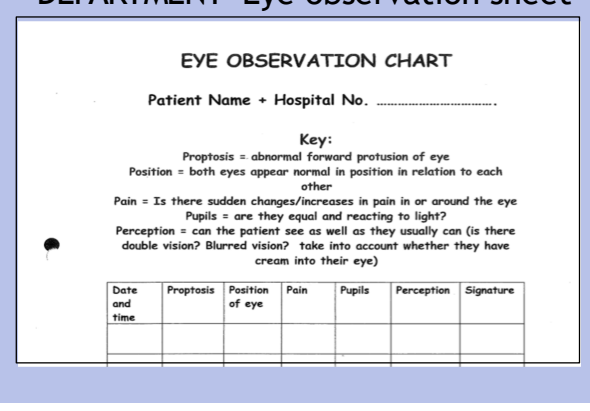
- Mean time elapsed from presentation until initial eye assessment - **2:30 h**
- 90 % on maxillofacial review in Emergency Department
- 100% radiographic investigation
- 0% required orbital decompression
- 11% subsequent surgery
- **No loss of vision**
- Notable absence of eye observation records from clinical notes
- In 33% of cases eye observations were requested based on clinical need - >38 % recorded
- **64.75%** on documenting history and assessment





ACTION

Teaching delivered to various clinical groups within the EMERGENCY DEPARTMENT Eye observation sheet



EYE OBSERVATION CHART

Patient Name + Hospital No. .....

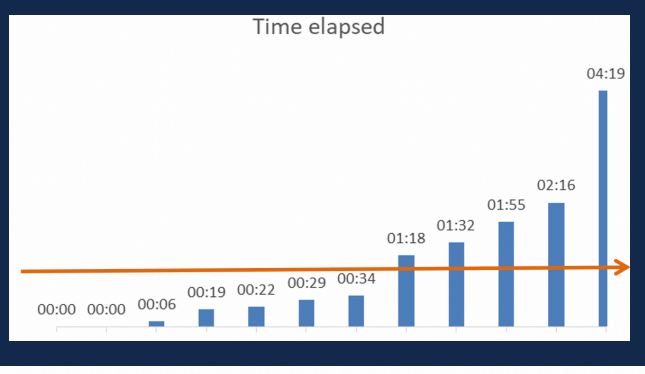
Key:

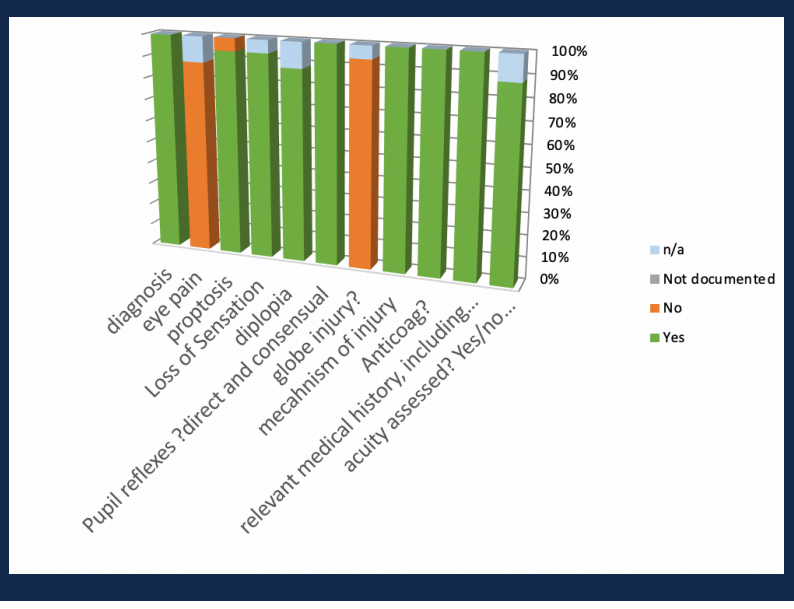
Proptosis = abnormal forward protusion of eye
Position = both eyes appear normal in position in relation to each other
Pain = Is there sudden changes/increases in pain in or around the eye
Pupils = are they equal and reacting to light?
Perception = can the patient see as well as they usually can (is there double vision? Blurred vision? take into account whether they have cream into their eye)

Date and time	Proptosis	Position of eye	Pain	Pupils	Perception	Signature

SECOND CYCLE

- Mean time elapsed from presentation until initial eye assessment - **01:05 h**
- Significant improvement in initial eye assessment by 1:25 h
- 59% of OMFS review in Emergency Department
- 100 % radiographic investigations
- 25% of patients required surgery
- No orbital decompression performed for this cohort
- In 24 % of cases eye observations were requested based on clinical need-> 50% recorded
- **100%** on documenting history and assessment





CONCLUSION

- We raised awareness through teaching on importance of eye observations for significant orbital injuries or for those patients with risk of delayed retrobulbar haemorrhage
- 100% documentation of orbital injury assessment observed following teaching sessions
- All patients are investigated properly
- Highlights importance of regular teaching within the trust to improve patient safety
- No vision loss identified in both cycles, as a result of human error

No interests to declare

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