Ophthalmologists managing acute medical emergencies: Avoiding disaster

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Introduction

As the elderly population in the United Kingdom continues to grow, ophthalmology as a speciality will be impacted, since many ocular diseases occur with increasing severity and frequency with older age. With increasing survival into old age, the likelihood of developing multiple complex medical comorbidities increases.

Any ophthalmology inpatient may become systemically unwell due to pre-existing medical conditions or as a result of new medical conditions whilst in hospital, such as hospital-acquired-pneumonia. Ophthalmic training does not provide general medical exposure to maintain confidence and competence in managing medical emergencies. In our Trust, there is minimal medical cover for ophthalmic inpatients between 12 noon and 8pm, outside the cardiac arrest team. Our trainee survey highlighted a patient safety issue related to difficulties in securing timely medical review and the ophthalmologists' lack of recent experience in managing medically unwell patients. Yearly mandatory Basic Life Support (BLS) training alone is inadequate to prepare trainees to manage medically deteriorating patients and emergencies. We proposed a regular teaching session for ophthalmologists to refresh confidence and competence in medical management, and to improve patient safety for ophthalmic inpatients.

Method

A senior medical registrar was invited to run a half-day session as part of the ophthalmology teaching program. The aim of the session was to ensure patients were safely managed by ophthalmic trainees prior to review by the on-call medical team, which may be delayed. Emphasis was made on immediate assessment using ABCDE approach, urgent investigations, immediate treatment, simple bedside monitoring and most importantly, the Trust standard operating procedure (SOP) regarding escalation of care. This session covered common acute medical presentations on ophthalmology ward including sepsis, pulmonary embolism, cardiac, hypertensive and diabetic emergencies. Pre-training and post-training surveys were distributed to all participants to evaluate overall effectiveness of the training they received.

Results

Seven trainees out of a cohort of 15 trainees attended the half-day session. Absence was due to sickness, annual leave or district general hospital placement. The duration of time since their last general medical or general surgical posts was highly variable, ranging from 1 year to over 7 years.

Results (cont.)

Mean pre-session confidence in managing medical emergencies was self-scored at 43% (SD 16%). There was a variable relationship between the time since the trainees' most recent general training post and their confidence, with a trend towards longer gaps resulting in lower confidence (Figure 1).

Following the medical refresher teaching session, all participants reported an increase in confidence in managing medical emergencies (Figure 2). The mean confidence level following teaching was self-scored at 62% (S.D 15%), a 44% increase in confidence level from baseline.

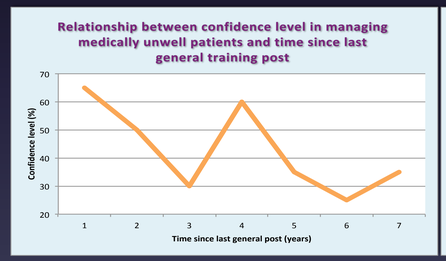


Figure 1. Variable relationship between confidence level and time since last general medical or surgical training post, although the trend shows lower confidence level with longer time since last general training post.

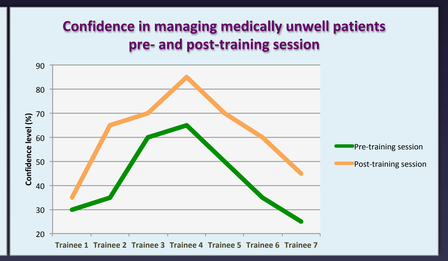


Figure 2. There is an overall increase in level of confidence in managing medically unwell patients on ophthalmology ward following a single training session.

Following favourable feedback, a similar session was run a year later and was attended by 10 trainees. Pre-training surveys at the second teaching revealed that four trainees dealt with medically unwell patients at least once monthly, with one trainee reporting weekly encounters on the ophthalmology ward. 100% of participants felt "very confident" and "somewhat confident" in initiating management of acutely unwell patients following the second medical refresher session, compared to 30% prior to the session.

Discussion

Ophthalmology is primarily an outpatient-based speciality, although there are instances where inpatient care is required either on an elective or emergency basis. Our patient population is becoming increasingly complex with multiple medical comorbidities. The COVID-19 pandemic has clearly shown that patients with pre-existing illnesses are at higher risk of morbidity and mortality.[1] Ophthalmic speciality training (OST) has become increasingly streamlined without any general medical training for the duration of the program, meaning that trainees and consultants are often relying on experience from many years ago.

Our survey highlighted that ophthalmic trainees in our Trust encountered medically unwell ophthalmology inpatients at least once monthly. OST curriculum covers some aspects of medical emergency management, but infrequent exposure and the lack of targeted training result in reduced confidence.[2] A qualitative study to explore NHS staff members' perceptions of safety issues faced by patients who are placed on clinically inappropriate wards showed that lack of knowledge or specialist expertise is a contributory factor underlying patient safety concerns.[3]

Our data suggests that a single annual half-day medical refresher teaching session increased ophthalmologists' confidence in managing medically unwell patients prior to review by the on-call medical team thus improving patient safety. Medical referral and escalation pathways must be included in the session to ensure timely review and possible take-over by the appropriate team. Medical refresher sessions may be particularly useful when immediate medical review is difficult due to the heavy workload of medical teams, or lack of medical on-call cover (e.g. standalone eye hospitals). Yearly medical refresher sessions have now been integrated as part of ophthalmology postgraduate teaching in our Trust.

Conclusion

The safe management of medically unwell patients is crucial. Annual half-day teaching for ophthalmologists covering medical emergencies increases their confidence in assessing and initiating management of medically unwell inpatients and improves their ability to follow SOP to secure timely medical review. Medical refresher teaching should be considered as part of ophthalmology postgraduate teaching programs.

References:
1. Espinosa OA, Zanetti ADS, Antunes EF, Longhi FG, Matos TA, Battaglini PF. Prevalence of comorbidities in patients and mortality cases affected by SARS-CoV2: a systematic review and meta-analysis. *Rev Inst Med Trop Sao Paulo*. 2020;62:e43.
2. The Royal College of Ophthalmologists. *RCOphth - Curriculum Summary*. Rcophth.ac.uk. https://www.rcophth.ac.uk/curriculum/ost/summary/. Published 2021. Accessed May 3, 2021.
3. Goulding L, Adamson J, Watt I, Wright J. Patient safety in patients who occupy beds on clinically inappropriate wards: a qualitative interview study with NHS staff. *BMJ Qual Saf*. 2012;21(3):218-224.