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COMMENT

Care for critically Ill patients with COVID-19: don't forget the eyes

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We would like to expand on the comment by Ting et al. [1], by adding considerations for candidaemia retinal screening in ICU patients. Recently released Royal College of Ophthalmologists (RCOphth) candidaemia screening guidance replaces 'urgent ophthalmology review' with 'review as an exception on a case by case basis' (https://www.rcophth.ac.uk/wp-content/uploads/2020/04/Eye-Care-in-the-Intensive-Care-Unit-2020.pdf), a potentially lower standard of care. Ophthalmic candida carries a small but significant risk to sight. The current COVID-19 pandemic adds extra considerations when deciding whether to review these patients. COVID-19 is a novel disease with limited evidence in this context. Furthermore, there are risks to examiner, reports of limited personal protective equipment (PPE) and a depleted workforce. Whilst redeployed across Intensive Care Unit (ICU) COVID wards, the authors performed a service evaluation audit to better understand the burden of candidaemia screening during the pandemic.

The first confirmed COVID-19 case at Kings College, London, presented on 25th February 2020. Over the following 2 months there were 212 COVID-19 ICU admissions and of those, five patients developed an intravenous line related candidaemia. Two patients did not survive long enough to be referred for ophthalmic screening. Three were screened and found to have no ophthalmic involvement. Of these, two were receiving intravenous echinocandin antifungal medication (anidulafungin), and one ambisome (amphotericin).

During the COVID-19 pandemic prolonged intensive care stays were common. Pre-COVID-19 estimates of line related candidaemia have been reported as 5 per 1000 ICU admissions [2]. In this 2-month audit period, we observed 5 cases per 212 ICU admissions; a fivefold increase. This may be a reflection of long ICU stays with multiple intravenous lines. Although the absolute numbers of candidaemia were thankfully small, the incidence of ocular involvement was not higher than previously reported [3, 4]. It is however important to note that patients with candidaemia were treated with systemic antifungal agents which have poor ocular penetrance. In the setting of ocular candida, a treatment change would be required.

We consider ophthalmology review following candidaemia to be an appropriate screening process, meeting criteria laid out in gov.uk guidance in relation to viability, effectiveness and appropriateness (https://www.gov.uk/government/publications/evidence-review-criteria-national-screening-programmes/criteria-for-appraising-the-viability-effectiveness-and-appropriateness-of-a-screening-programme). Ocular symptoms have been shown to poorly correlate with ophthalmic findings [5]. Dilated fundoscopy is a safe way to identify an uncommon, but sight threatening condition such as chorioretinitis/endophthalmitis. Confirming ophthalmic involvement will optimise the care: switching systemic medication from an echinocandin (common first-line agent) to one with a better ocular penetrance with longer duration of administration, and/or intravitreal injection of antifungal medication, or vitrectomy if indicated.

Our experience was that concordance with the previous RCOphth guidance (a higher standard of care) carried no significant burden to the department and was achievable within the height of the pandemic. Despite initial concerns, adequate PPE was available at all times and the ophthalmologists were well supported by ICU staff. We owe a duty of care to our inpatients, irrespective of COVID status. We strongly encourage colleagues to consider these factors when making candida screening decisions. Patient care will be improved and solidarity with our medical colleagues strengthened.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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