



EMERGENCY EYE CARE

An eye condition is an emergency if its occurrence is unpredictable and it requires treatment or admission at short notice to avoid damage to the eye or eyesight.

The College will not attempt to identify every type of case that falls into the emergency category: it is the responsibility of the Consultant under whose care the patient is registered to identify those cases and ensure timely delivery of care. However, examples would be bacterial endophthalmitis, upper bullous retinal detachment with the macula threatened, and arteritic ischaemic optic neuropathy. There are many others.

Every eye unit must have strategies or protocols in place to deal with eye emergencies. The strategies should cover the emergency care of patients who come to the hospital with a problem, and also the emergency care of patients who are already in the hospital or unit for some other reason who then develop an eye problem. All doctors, nurses, paramedical and administrative staff dealing with emergencies must be fully aware of the unit strategy and how to implement it.

Where eye emergencies are seen by trainee doctors, nurses or other health professionals, there must at all times, be supervision by a Consultant Ophthalmologist or Specialty Doctor who will carry ultimate clinical responsibility for patients. A Consultant or Specialty Doctor must be available to provide advice at all times. This includes being available by telephone for advice out of normal working hours and being available to come into the hospital to see patients as required.

If the eye unit is closed at some times, but the hospital accepts casualties during those periods, the casualty department must be aware of how to reliably obtain an eye opinion and treatment for eye patients who present to them and cannot be managed by the general casualty doctors.



Networks for collaborative care

If the eye unit is “stand alone” (e.g.: as a mobile cataract unit) or otherwise isolated and only open at certain times, patients who have had treatment must be given information to enable them to reliably contact a competent professional so that, if they have a problem requiring emergency advice or treatment, this can be accessed immediately.

Comprehensive, reliable emergency eye care will be provided by different eye units in differing ways.

For instance:

- Wholly by the staff of the unit itself.
- Wholly by the staff of the unit itself at certain times, but wholly by another unit at other times (for instance where the unit closes in the evening and/or at weekends).
- Mostly by the staff of the unit, but by another unit for certain sub-specialities at some times (for instance where there are only one or two Vitreo-retinal surgeons in the department, so as to cover predictable absences).

It is most important that, when it ***routinely*** refers emergency patients elsewhere, a unit has agreed reliable administrative and clinical arrangements with the receiving unit (or units) so that, as far as is possible, difficulties are not encountered at the time of referral. It is also important that reliable arrangements for on-going follow up are made between the units so that, in the event of a problem developing, patients can be seen rapidly at the referring unit rather than having to travel back to where they went for emergency treatment.



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In deciding where to refer patients, the unit to which referrals are made should be geographically as close as possible to the referring unit, as patients do not wish to travel excessive distances and many hours travelling may adversely affect outcome. It may also deter them from making that journey thus denying some patients access to essential treatment.

Equipment and facilities

Equipment and facilities necessary for individual cases will be dictated by the clinical condition but facilities available to the on-call services should include provision for full ophthalmic examination for which a dedicated room should be available. Equipment provided should include the following: standard visual acuity testing chart with trial frames and trial lens set, near vision and colour vision testing equipment, slit lamp with tonometer, gonioscope lens for anterior chamber angle assessment, indirect ophthalmoscope plus the appropriate lenses (20 dioptre and 90 dioptre lenses) for fundal examination.

Equipment for obtaining microbiology and virology specimens should be available. Instruments plus suture material should be provided to deal with injuries to the globe and periocular tissues where immediate repair is appropriate. There should be the equipment necessary for removal of foreign material from the ocular surface and the necessary facilities to perform irrigation of the ocular surface in the case of chemical injury.

There should be the necessary facilities to obtain urgent blood tests such as erythrocyte sedimentation rate or plasma viscosity and a microbiology service to receive and process specimens for culture and provide immediate interpretation of gram stains obtained in infective conditions.

Ophthalmic ultrasound is extremely valuable in assessing cases where the view of the fundus is compromised. This equipment should be available to the emergency



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doctor as this examination may make the difference between making a vitreo-retinal referral urgently and managing a patient expectantly.

The appropriate topical medications necessary to perform ophthalmic examination should be available, including the following: Minims of topical anaesthetic, mydriatics, and topical fluorescein dye.

There should be an adequate stock of medications which may be required to treat emergency conditions where there is no pharmacy service immediately available.

These will include the following:

Topical steroids, topical antibiotics (ointment and drops), mydriatics, topical anti-hypertensives (beta-blocker plus alternatives), aciclovir ointment, aciclovir tablets, non-steroidal anti-inflammatory tablets, prednisolone tablets, intravenous steroids (methylprednisolone and hydrocortisone), intravenous acetazolamide, acetazolamide tablets, anti-histamine tablets, oral and intravenous antibiotics (including alternatives to penicillin), amikacin vancomycin and moxifloxacin, systemic intraocular pressure lowering agents; mannitol and glycerol.

Every unit providing intraocular surgery or injection should have the means to perform taps and give intravitreal injections for endophthalmitis.

Emergency care should be provided where there are facilities for resuscitation plus available trained staff that can be called in the event of a systemic emergency such as cardiac arrest. X-ray facilities should be reasonably easily accessible.



Guidelines for nurse practitioners

Where emergency care is provided by nurse practitioners clear guidelines regarding which conditions should be dealt with by the nurse practitioner and which should be referred to an ophthalmic specialist should exist. In addition comprehensive guidelines regarding the administration of treatment for specified conditions is necessary. Nurse practitioners providing ophthalmic care should be supervised and undergo regular appraisal and their service should be subject to audit. Triage is a useful and effective way of prioritising patients.

European Working Time Regulations

The European Working Time Regulations and the “New Deal” have prompted some changes in the provision of ophthalmic emergency care. Units may have developed arrangements with adjacent units to share the provision of out-of-hours cover or have adopted protocols that allow specified conditions to be dealt with by trained ophthalmic nurse practitioners overnight. It is incumbent on each ophthalmic unit to make arrangements for the provision of a service for ophthalmic trauma and emergencies throughout the day and night. Where an emergency eye service is provided by medical staff at the level of foundation doctor or inexperienced specialist trainee there should be adequate supervision and advice available from experienced medical staff.

Training

Training in emergency ophthalmology is essential for those who will form the next generation of consultants. Eye units providing emergency care should ensure that they provide supervised training for doctors.

It is important that trainees are not left unsupervised to manage cases that are beyond their experience and/or capability.



Retinal Service

Many units will not provide a vitreo-retinal service. Where this is the case there should be clear guidance to the on-call staff regarding which cases require immediate referral to the local vitreo-retinal unit. It is the duty of a referring unit to ensure that a sufficiently experienced ophthalmologist examines the patient to ensure that immediate referral is made where, and only where, it is necessary.

It is, in turn, the duty of vitreo-retinal units providing a tertiary service to have a clear mechanism for acceptance of referrals and provision of advice to the referring unit where any doubt exists.

Cases of intra-ocular foreign body require specific mention. These cases require sub-specialist expertise and urgent referral should be made to a vitreo-retinal service.

Paediatric emergencies

Paediatric ophthalmic accident and emergency cases must be seen in an appropriately equipped and staffed setting, this may be in a general accident and emergency unit, a dedicated paediatric accident and emergency unit, a general eye unit or a dedicated paediatric eye unit. Children admitted with acute eye problems should be placed on a ward with the appropriate ophthalmic and paediatric nursing expertise.

Where children are admitted with conditions such as orbital cellulitis these must be managed in conjunction with a paediatrician.

Admission of ophthalmic emergencies

Beds should be available for admission of ophthalmic emergencies. The bed need not be on a dedicated ophthalmic ward but staff should have experience of nursing ophthalmic cases and their number must be sufficient to allow the appropriate treatment to be applied, for instance, frequent topical medication. Where infective



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cases are admitted they should be isolated from admissions for routine ophthalmic surgery.

Operating on ophthalmic emergencies

A theatre should be available to perform emergency ophthalmic procedures where necessary. The theatre should be equipped to allow intraocular and extraocular surgery and lid repair including operating microscope and the equipment and instruments necessary for cataract, corneal and squint surgery. Emergency ophthalmic surgery should be performed out of hours only by medical staff sufficiently experienced to manage the case, who should be assisted by supporting theatre staff with ophthalmic training and expertise. Surgery should be carried out within regular theatre hours, unless there is a compelling clinical reason for operating out of hours, and it is considered safe to do so.

Anaesthetic provision

Ophthalmic surgery is delicate; requiring alert, specialist, medical, nursing and ancillary staff. An emergency eye unit should therefore have sufficient anaesthetic cover available to allow out of hours surgery in the evening or during the day at weekends without having to operate between 10pm-8am because of pressure of other more general surgical and other urgent cases.

Laser treatment

The Argon and YAG laser equipment is available in the vast majority of eye units and should always be accessible out-of-hours. This is so that emergency cases such as incipient rubeotic glaucoma, retinal tears and acute angle closure glaucoma can be treated without delay



Finally

Emergency eye care is an important component in the provision of a comprehensive ophthalmic service. Prompt and correct management of acute eye conditions and injuries will prevent avoidable problems and improve outcomes. It is important that where initial presentation of emergency conditions is to a general A&E department, the eye unit provides adequate training and support to the doctors staffing that department. Thus we can ensure that the management of minor conditions is appropriate and that prompt referrals are made where they are necessary and avoided where they are not. This is equally applicable to nurse practitioners, both ophthalmic specialist and those in A&E departments and walk-in centres, who will increasingly be involved in the provision of care to ophthalmic emergencies.

Reference: Good Medical Practice para 48 Arranging Cover and para 6 Raising Concerns about patient safety

'Para 48 reads: you must be satisfied that, when you are off duty, suitable arrangements have been made for your patient's medical care. These arrangements should include effective hand-over procedures, involving clear communication with healthcare colleagues. If you are concerned that the arrangements are not suitable, you should take steps to safeguard patient care and you must follow the guidance in paragraph 6'

Next Review Date: 2016