



Guidance on the provision of Ophthalmic Anaesthesia Services

When considering the provision of anaesthesia, the Royal College of Anaesthetists recommends that the following areas should be addressed. The goal is to ensure a comprehensive, quality service dedicated to the care of patients and to the education and professional development of staff. The provision of adequate funding to provide the services described should be considered.

Summary

- There should be a named lead clinician responsible for ophthalmic anaesthesia services.¹
- Patients undergoing procedures involving local anaesthesia using a sharp needle technique and those requiring intravenous sedation must have an anaesthetist immediately available in the theatre suite.¹
- Local anaesthesia using topical or sub Tenon's block does not require the immediate availability of an anaesthetist in the theatre suite.¹
- On local anaesthetic lists without an anaesthetist present, patients must be monitored by trained professionals during establishment of local anaesthesia and throughout the operative procedure.¹
- Patients do not need to be starved for cataract surgery under local anaesthesia or when hypnotic or sedative drugs are used in low doses to produce only anxiolysis. Patients do need to be starved when conscious or deeper planes of sedation are employed, or when using combinations of drugs or infusions.¹
- Needle-based local anaesthetic blocks should be performed or directly supervised only by a surgeon or anaesthetist who has been specifically trained. This training should be provided for trainees and new staff and overseen by an expert.¹
- Pre-admission anaesthetic assessment by appropriately trained staff is highly desirable because of the high proportion of day case patients, and significant incidence of medical co-morbidity.¹⁻³
- Attention should be paid to current guidelines for day case anaesthesia.³⁻⁵
- Paediatric patients should have their procedures where possible as day cases.^{6,7}
- Paediatric patients should be on designated paediatric lists where possible and anaesthetised by an appropriately trained and experienced anaesthetist.^{7,8}
- Children under five years old should normally be anaesthetised by a consultant or under the direct supervision of a consultant.⁸
- The elderly and systemically sick must be anaesthetised in an appropriate environment with arrangements in place to gain prompt access to in-patient medical and critical care if required.⁹
- Departments should have protocols covering the prioritising of patients requiring urgent procedures based on surgical need and medical fitness for anaesthesia. Many procedures can wait to be done in routine hours.^{10,11}

Introduction: The importance of anaesthesia services for ophthalmic surgery

- Ophthalmic surgery is undertaken within multidisciplinary units, such as general hospitals, in isolated units and in large single specialty centres, as in-patient or day cases. All environments require appropriate staffing levels, skill mix and facilities.
- Anaesthesia for ophthalmic surgery is a recognised sub-specialty of anaesthetic practice. Anaesthetic services are provided for a wide age range of patients, from neonates to the very elderly.
- Ophthalmic surgery is often required for ocular manifestations of systemic disease and there is a relatively high incidence of patients with uncommon medical conditions.
- There is an increasing trend towards day case services and use of local anaesthesia (LA) for ophthalmic procedures. Local anaesthesia can be provided topically (by use of eye drops), by sharp needle technique (peribulbar and retrobulbar blocks) and blunt needle techniques (sub Tenon's).

Levels of provision of service

1 Staffing requirements

- 1.1 All intraocular surgery performed under LA should be carried out in a facility which is appropriately staffed for resuscitation.¹
- 1.2 Lists under local anaesthetic (LA) which do not require the immediate presence of an anaesthetist in the theatre suite do require the presence of an appropriately trained anaesthetic nurse, ophthalmic theatre nurse or operating department practitioner (ODP) to monitor the patient during establishment of local anaesthesia and throughout the operative procedure. This should be his/her sole responsibility.
- 1.3 Dedicated skilled assistance for the anaesthetist must be provided in every situation where anaesthesia or sedation is employed.¹²
- 1.4 If in-patients are cared for in isolated/single specialty units there must be appropriate medical cover and nursing care.

2 Equipment, support services and facilities

Equipment

- 2.1 All intraocular surgery performed under LA should be carried out in a facility which is appropriately equipped

for resuscitation. Oxygen and suction must be available.¹

- 2.2 Minimum anaesthesia monitoring standards should be adhered to.^{1,12}
- 2.3 All anaesthetic equipment and monitoring should conform to the current standards and should be regularly checked, maintained and in good working order.^{13,14}
- 2.4 Appropriate facilities for monitoring in the post-operative period must be available.^{13,15}

Support Services

- 2.5 **Pre-admission assessment.** Pre-admission anaesthetic assessment is highly desirable.¹ Patients are often elderly and have concomitant systemic disease requiring optimisation prior to surgery. There is a relatively high incidence of uncommon conditions which may need forward planning or correspondence with other units. Pre-admission assessment also plays a part in allocating patients appropriately to LA or general anaesthetic techniques and selecting patients for day case. This process requires careful assessment by appropriately trained staff underpinned by guidelines on patient selection.

Facilities

- 2.6 Isolated units must have appropriate facilities for the care they aim to provide.
- 2.7 Ophthalmic surgery under both general and local anaesthesia is often provided as a day case service and the facilities available should be compliant with the current day case recommendations.
- 2.8 Facilities and staffing in the operating facility must allow for physical infirmity of patients. There should be comfortable patient access to the theatre suite, e.g. wheelchair if required. There should be adequate staff to help patients on and off operating tables with gentleness and dignity. There should be devices available to adjust patient position for maximum comfort and surgical access.

Guidelines and protocols

- 2.9 There must be a robust procedure for checking the laterality of the eye to be operated on prior to local anaesthetic block. This should include the eye being marked by the responsible surgical team prior to admission to the surgical suite. On arrival in the anaesthetic room the consent form must be checked. This must be done by the anaesthetist or surgeon performing the block and an ODP or theatre nurse. The patient must be asked to confirm on which eye they expect to have the operation.

2.10 Guidelines and protocols should exist on the following:

- Patient selection for day case procedures.
- Patient selection for procedures under LA.
- Sedation of patients for ophthalmic procedures.
- Scheduling of urgent procedures in- and out-of-hours.

3 Areas of special requirement

Children

3.1 Children should be anaesthetised where possible on a day case basis.⁶ An appropriately trained and experienced anaesthetist should anaesthetise children.^{7,8} There should be designated paediatric operating lists exclusively for children where possible. Children under five years old must be anaesthetised by, or under the direct supervision of, a consultant.⁸

Procedures performed with only local anaesthesia

3.2 Cataract surgery should be performed under LA where possible. When choosing a local anaesthetic technique, attention must be paid to the physical condition of the patient with respect to ability to lie comfortably on the operating table for the anticipated duration of the block and operating procedure. A trained surgeon or anaesthetist must administer needle-based blocks. Only sub Tenon's and topical anaesthesia do not require intravenous access for the procedure or the immediate presence of an anaesthetist in the theatre suite, although at least one member of staff trained in advanced life support must be present. Procedures under sharp needle techniques such as peribulbar and retrobulbar anaesthesia do require intravenous access and the immediate presence of an anaesthetist in the theatre suite. Many units in this country are not starving patients for LA procedures and this may be considered reasonable practice.^{1,16}

Procedures requiring sedation

3.3 All patients receiving intravenous sedation require an anaesthetist to be immediately available in the theatre.¹ Patients do not need to be starved when hypnotic or sedative drugs are used in low doses to produce simple anxiolysis. Patients do need to be starved when conscious or deeper planes of sedation are employed, or when using combinations of drugs such as opioid analgesics with benzodiazepines or low dose propofol infusion. In view of the risk of unexpectedly deeper sedation, it is desirable to develop local protocols in conjunction with the department of anaesthesia for sedation of patients undergoing ophthalmic procedures.^{1,16}

Patients with systemic illness

3.4 Patients requiring general anaesthesia who are systemically unwell should undergo operation in a facility with full medical back-up. In isolated units this may mean making arrangements for the operation to be done at a local multidisciplinary unit. Protocols must be in place for transfer to multidisciplinary units for the patients who become sick in isolated units and require in-patient medical or critical care.

4 Training and education

4.1 There should be a structured training programme in place to ensure that anaesthetists and ophthalmologists new to local anaesthetic techniques learn the anatomy of the orbit and are formally trained to perform invasive eye blocks. The training should be overseen by an expert. Only when a trainee's competence has been assessed by an experienced practitioner should they practise independently on patients.

4.2 All trainee anaesthetists should undergo competency-based assessment appropriate to their level of training on the knowledge, skills, attitudes and behaviour appropriate to ophthalmic anaesthesia.¹⁷

4.3 All anaesthetists working in ophthalmic services should have access to continuing educational and professional development facilities for advancing their knowledge and practical skills associated with ophthalmic anaesthesia.

4.4 All ophthalmic theatre nurses, anaesthetic nurses and ODPs must have up-to-date basic life support training and ophthalmic nurses should be trained in cardiopulmonary resuscitation.¹

5 Research and audit

5.1 Research in ophthalmic anaesthesia should be encouraged and time set aside for this activity.

5.2 Ophthalmic anaesthesia should be included in departmental audit programmes, including ongoing audit of complications and adverse events.¹

6 Organisation and administration

6.1 In multidisciplinary units there should be a named lead clinician responsible for ophthalmic anaesthesia services. In single specialty centres, the anaesthetic department should adopt the generic standards described throughout this document. This should include a lead paediatric anaesthetist if children are treated. The service should be consultant led.

- 6.2 Many procedures do not have to be performed out-of-hours. Anaesthetists and surgeons together should devise departmental protocols for the handling of patients requiring urgent procedures, to allow prioritisation from both surgical and anaesthetic perspectives. The eye condition, American Society of Anesthesiologists (ASA) grade and age of patients need to be considered when arranging out-of-hours surgery. This is particularly important in isolated units.

7 Patient information

- 7.1 Patient information covering procedures for the day of admission and details of local or general anaesthetic must be available prior to admission. It should be available in large print or Braille if required.

References

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