



— ASSOCIATION OF —
VETERINARY ANAESTHETISTS

Celebrating 50 years of championing safe anaesthesia

The Association of Veterinary Anaesthetists'
GUIDELINES FOR SAFER ANAESTHESIA

First Edition, 2018

1 Patient Safety



'AVA recommended procedures and safety checklist' incorporated in to every case.

Discussion:

Anaesthesia is a complex process involving many critical steps that need to be performed in a correct and timely manner. Within a busy veterinary clinic there can be a tendency to try and over-simplify this complexity which can lead to steps being missed and vital components of a "safe" anaesthetic process being overlooked.

The use of checklists ensure safety critical steps are performed, as well as improving teamwork and communication (McMillan 2014).

More information: The AVA has designed veterinary-specific safety procedures and checklists: <https://www.ava.eu.com/resources/checklists/>

2 Anaesthetic Case Planning



Anaesthesia plan considered for each individual patient, covering patient risk factors, procedure risk factors, suitable anaesthesia drugs, fluids and monitoring aids.

Consideration given to the limits of anaesthesia care that can be provided, and outside assistance sought or case referral to specialist anaesthesia facilities arranged when required.

Discussion:

Every patient undergoing anaesthesia should be treated as an individual.

Although previously devised protocols may be suitable for the bulk of routine procedures on healthy patients, thought must be given to ensure an individual patient meets these criteria.

Anaesthesia plans must be made to meet specific needs and risk factors of unhealthy patients or patients undergoing non-routine procedures.

More information: <https://ava.eu.com/>

3 Analgesia



Analgesia should be a top priority of care.

A range of analgesic therapies should be available and utilised including full opioid agonists, local anaesthetics, NSAIDs, adjunctive drug therapies and non-drug therapies.

An analgesic plan should be made for each case recognising the expected level and modality of pain.

Patients should be actively assessed using validated pain scores and results responded to appropriately.

Patients with known or expected pain should be prescribed ongoing analgesia at discharge and the owners should be informed of pain related behavioural signs.

Discussion:

The ability to experience pain is universally shared by all mammals, including companion animals, and as members of the veterinary healthcare team it is our moral and ethical duty to mitigate this suffering to the best of our ability. This begins by evaluating for pain at every patient contact (Mathews et al. 2014).

Analgesic drugs all have the potential to cause side effects. When pain is moderate or severe, the veterinarian should consider combining drugs that act at different sites in the pain pathway to provide optimal analgesia; multimodal analgesia (sometimes referred to as balanced analgesia) is the name given to this approach to treating pain.

Combining different classes of analgesic drugs allows the veterinarian to optimize the management of pain, while limiting the occurrence of side effects. Drugs most commonly used in multimodal analgesia include opioids, NSAIDs, local anaesthetics, NMDA antagonists and alpha2 adrenoceptor agonists (Mathews et al. 2014).

Access to full agonist opioids is recommended as partial and agonist/antagonist opioids are not suitable for treatment of moderate–severe pain, which can be commonly expected to be seen in general practice from either surgery, trauma or disease.

More information: <http://www.wsava.org/guidelines/global-pain-council-guidelines>

4 Staff



Qualified veterinary staff, who have received anaesthesia training, to monitor every anaesthetic.

Veterinary Students to be supervised by a qualified member of veterinary staff when monitoring an anaesthetic.

Use of advanced anaesthesia trained staff whenever available or required.

Discussion:

The AVA believes that veterinary anaesthesia is a complicated enough subject that its management should only be entrusted to staff that have received a rounded veterinary education and have documented this through industry respected qualifications. Examples of this include graduates of EAEVE accredited veterinary institutions, British RVNs, US CVTs/RVTs.

The AVA actively supports the progression of veterinary professionals through specialist and advanced training, such as DipECVAA, DipACVAA, VTS (anesthesia & analgesia) .

More information:

<http://www.eaeve.org/about-eaeve/members.html>

<http://www.ecvaa.org/>

<http://www.acvaa.org/>

<http://avtaa-vts.org/>

5 Monitoring



Dedicated Anaesthetist monitoring each case.

Additional monitoring equipment of pulse oximetry, capnography and blood pressure monitors available and utilised.

Discussion:

The AVA believes that a suitably trained and focused anaesthetist is the most vital instrument for safely monitoring an anaesthetic, and cannot be replaced by a machine.

The additional information gained by pulse oximetry, capnography and blood pressure cannot be objectively gained by a person alone and the interpretation of this information will regularly improve case management. Additional monitoring such as ECG may be required in some cases.

6 Patient Support



Active temperature monitoring and temperature support, including preventative measures and active warming devices available and utilised.

Fluid therapy considered for every anaesthetic and goal directed administration provided where indicated. Availability of fluid pumps and/or syringe drivers to ensure accuracy.

Blood Pressure support considered from outset and managed where appropriate through anaesthetic drug selection, fluid therapy and appropriate drug administration.

Requirement of ventilation support considered from outset. Availability of manual or mechanical means of positive pressure ventilation utilised when necessary.

Discussion:

Two large-scale studies have reported a high incidence of post-operative hypothermia (83.6% in dogs and 96.7% in cats) (Redondo, Suesta, Gil, et al. 2012; Redondo, Suesta, Serra, et al. 2012).

Hypothermia disrupts homeostasis and has several detrimental effect on a patients wellbeing, preventative measures such as blankets and active warming therapies such as warm air blowers should be utilised (Armstrong et al. 2005).

Administration of fluid therapy has advantages for all anaesthetised patients. Consideration should be given to type and dose or whether it is appropriate to withhold. Careful administration using calibrated administration equipment and continued monitoring will minimise risks of adverse effects (Davis et al. 2013).

Blood pressure should be kept within normal ranges to protect vital organs and promote adequate tissue perfusion. Fluid therapy should not be solely relied upon to correct anaesthetic related hypotension – initial drug selection and dosage should be used preventively (i.e. reducing dependency on vasodilating drugs such as isoflurane), and appropriate supportive drugs should also be available as a treatment option.

Consideration of patient signalment and procedure can highlight risk of hypoventilation or apnoea during anaesthesia – plans for positive pressure ventilation of high risk patients should be made. Equipment should be available to allow endotracheal intubation and to apply positive pressure ventilation in all cases.

More Information: AAHA Fluid therapy guidelines

7 Emergency Ready



All staff to have received CPR training, and CPR simulations to be practiced in house every 6 months. All patients to have an IV access during anaesthesia via a IV catheter. Emergency equipment to be available at all times.

Discussion:

Adherence to CPR guidelines can only be accomplished if personnel receive effective, standardized training and regular opportunities to refresh their skills.

The use of a pre-stocked, organized and functional arrest station is a key element in the efficient operation of CPR.

Maintaining IV access throughout an anaesthetic allows the quick administration of emergency drugs or fluids, and prevents wasted time in emergency situations. An IV catheter provides safe and secure IV access.

More Information: RECOVER Guidelines, ECC small talk podcasts

8 Recovery



Patients recovery from anaesthesia to be adequately monitored and recorded and to take place in a suitable location.

Discussion:

Recovery is a high risk period of anaesthesia accounting for over 60% of cats and rabbits and nearly 50% of dog anaesthetic related deaths (Brodelt et al. 2008). Patients should be receiving one-to-one care until extubation and should be under constant observation until they are alert and have a core body temperature of above 37°C.

Recovery areas should ideally be quiet and calm, have access to pulse oximetry and temperature measurement devices and have close access to emergency equipment.

Close attention should be paid to analgesia and nursing care of the patient.

More Information: AVA anaesthetic record forms, AVA safety checklists

9 Training



All clinical staff involved with anaesthesia to receive regular CPD on anaesthesia and analgesia. A dedicated member of staff to oversee practice policies and standards of care.

Discussion:

Veterinary staff that have an involvement in anaesthesia should keep up to date with current practices of anaesthesia through the reading of journals, attendance at CPD events, conferences and private study. This should be supported and encouraged by employers.

As veterinary surgeons often work independently, the appointment of a single member of staff to oversee broad anaesthesia policies can ensure a uniform high level of care.

More Information: AVA membership benefits, <https://ava.eu.com/resources/accreditation-form/>

10 Records



Professional records of anaesthesia kept, including patient details, procedure details, staff involved, drugs, monitoring and recovery. Records should be reviewed for morbidity and mortality issues.

Discussion:

The practice of keeping anaesthetic records has many benefits including: improved monitoring, patient details to hand, accurate record of timings, legal protection, data for future use.

Records should be clear and legible with all required information provided; they should clearly document a case from start to finish.

Morbidity and mortality should be reported and recorded, and can be discussed and reflected upon within formal M&M rounds.

More Information: <https://www.ava.eu.com/resources/checklists/>

Evidence based statement

Information provided here is based on best available evidence where possible, as referenced. Where sufficient data is not available to support the information provided, a team of AVA endorsed veterinary anaesthesia professionals have verified the information as best practice.

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