Taking Over Post-Operative Care

Tania Yelland VN CertEd
Lecturer in Veterinary Nursing
Bicton College

The transfer of patients from surgery to recovery is an extremely important process which is usually completed under time constraints, the pressures of daily responsibilities, and staffing issues.

It is for these reasons that effective techniques need to be adopted to ensure a fast and effective handover is completed achieving the best outcome for the patient. This in turn can help speed the safe and successful recovery of the patient.

There are several Nursing responsibilities and techniques that need to be implemented into achieve this.

Communication

Good communication within the team is vital to provide the best service to the patient and its owner. This communication process involves the Veterinary Surgeon and operating nurse, the operating nurse and the kennel nurse and finally from the kennel nurse to owner.

To ensure all areas are covered and nothing is missed it is a good idea to follow a set routine when handing over. Each member of staff should be aware of their set responsibilities.

Operating Nurse’s Responsibilities

The operating nurse should identify the most suitable time to gather information on the patient from the Veterinary surgeon. This should include:

Prior to transfer from the operating room

- Operation notes, actions and information of the surgery performed.
- The equipment used – This is more useful for pricing but also for client information.
- Medication – times and types as well as future treatments required.
- Any significant postoperative care e.g. feeding/physiotherapy
- Rechecks/stitches out/when the patient is likely to go home
- Who is contacting the owners and when.

**It is also the Operating Nurses responsibility to begin the transfer of the patient from the operating theatre to the kennel**

- Before moving the patient the procedure for ending anaesthesia should be followed. Nitrous oxide should have been turned off approximately 5 minutes before the end of surgery to ensure good oxygenation. Oxygen saturation should be continued to be monitored and maintained. – **Use of capnographs/pulse oximeters**

- The Endotracheal tube should be removed when indicated. This will be on an individual basis and will be operation dependant, for example during laryngeal tiebacks the patient should be able to lift its head before extubation. **Brachycephalic breeds, eye patients**

- The patient’s temperature should be taken and recorded before transfer. Inevitably the patient will have a low body temperature and this will need to be continuously monitored throughout recovery and treated, *watch out for an animal that isn’t shivering!* The animal should be dried if wet

- Any wounds that the patient may have should be cleaned and dressed appropriately. – Much easier to do when asleep Buster collar placed if awake?

Other things – purse string sutures, chest drains, notes
Once all this has been completed the animal can be ready to move.

**It is important to only move the animal once you are happy with its status**

**Observation**

- In a recent study figures on peri-anaesthetic death rates show many animals actually die in the recovery period.

- It has been recognised that 47 % dogs, 61% cats and 64% rabbits that died in the perianaesthetic period died in the recovery phase.

- It has not been identified exactly why this is but highlights the importance of the recovery phase and your actions.
Things to observe:

1. Body temperature
   - Animals are unable to maintain their body temperature during anaesthesia meaning hypothermia is a common occurrence.
   - Hypothermia is the main cause of a prolonged recovery, therefore the patient's temperature should be recorded every five minutes until a normal temperature has been reached and maintained.
   - Consider small animals such as exotics
   - There are many warming devices available such as Bair huggers, hot hands and heated pads. These should be set up by the kennel nurse prior to the arrival of the patient. **Remember to place a weight onto heat pads**

Another consideration is oxygen consumption in shivering animals has been found to be at least twice the amount of a normal animal. Oxygen therefore should be provided in all cases via an oxygen mask or nasoxygen tubes secured to the animal. Or by creating an oxygen chamber. This is something that is often missed!

This should also be the case for anaemic animals as they are also unable to compensate for the increased demand in oxygen.

This highlights the importance of monitoring the animal’s status before, during and after surgery.

2. Heart rate, pulse and respiration

   Capillary refill time and Mucous membrane colour should be observed at five minute intervals from handover until the animal wakes up and then regularly until the animal goes home.
   
   The chest should be auscultated with a stethoscope at regular intervals which may enable you to pick up over infusion of fluids.
   
   Pulse should be indentified and any irregularities recorded along with respiratory pattern

   **Pain? Stress? Infusion status**

   - NB Brachycephalic breeds – close observation is paramount due to elongated palates and small airways. The tongue should be pulled forward and the head and neck extended at all times.
   - Link to medication/anaesthetic agents recircling

3. Bloods

   Pre anaesthetic screening can be useful in providing you with information on the health status of the animal prior to surgery. It will also highlight issues
such as anaemia and kidney and liver function of the patient which may cause problems during the recovery period.
It may also be necessary to perform blood glucose tests on Small animals and diabetics to identify hypoglycaemia or blood gases to assess oxygen saturation which can directly affect the animal’s health. Calcium levels should also be checked for animals recovering from thyroidectomy. The patients may require blood tests repeating at the request of the veterinary surgery in subsequent days following surgery should the need arise e.g. blood gases/ electrolytes.

4. Bleeding/Wounds

Swabs should be counted and weighed at the end of surgery to assess blood loss. It is advisable to check the manufactures guidelines but most swabs can only hold 10 mls of blood. Swabs should be weighed prior to use and again following use. The difference in grams is equal to the blood loss in mls.

Record findings
Once blood loss is known fluid type and amount can be altered accordingly. Any further bleeding should be monitored and dressings applied where necessary.
Dressing changes should be noted and comments recorded following each dressing change.
Advice given on to monitor the wound and bandages etc ex fix care – note no removing scabs etc

5. Fluid therapy

The type and rate of fluid required will depend on the procedure and the amount of blood that has been lost during surgery.
Hydration status should be continually assessed throughout recovery.

For example, a diabetic may require Dextrose Saline or a patient with high blood loss may need to continue on a surgical rate of 10mls/kg/hour.

The start time and type should be recorded along with the time to be reduced or continued.
Fluid delivery should be monitored – Use of fluid pumps, Monitor leg position, catheter care

6. Urine output

Placement of a urinary catheter can sometimes be useful during surgery but also following surgery. It may be necessary to place a urinary catheter into the urethra whilst the patient recovers in spinal cases, bladder surgery, and recumbent animals but also in cases where urination needs to be closely monitored.
This will ensure accurate urine output can be recorded and fluids altered accordingly. This gives a clear indication of the patient’s hydration status as well as ensuring that the patient is comfortable – Bladder pain, urine scalding Feacal output link to opiods – enema? Taking outside to urinate defecate Monitoring amount of water that the patient has drunk offer asap

7. Medication

All medication that the animal has received during surgery should be recorded and explained during the handover process. Including the anaesthetic agents and premeds

This should include any medications containing adrenaline or drugs given as part of the anaesthetic alter Pulse rate and lignacaine/epidurals. Future medication should be highlighted indicating times and the amounts required. It may be beneficial to use tick sheets to avoid missing dosages.

Medication should be dispensed asap, correctly explained to owners e.g. metacam full stomach etc

Record Keeping

Everything that has been observed before, during and after handover of the patient should be recorded onto the patient’s record card. Include procedure, any observations during the procedure e.g. crashing etc

The initials of all staff recording such information should be included as well as dates, times and observations however minor.

All records should remain with each individual patient and not removed enabling all members of staff to access them at all times.

There are many other things to take into consideration when handing over a post operative patient. Many will be specific to the surgery performed or the type or breed of animal. Some considerations include

The recovery environment

Where you place the animal postoperatively will contribute to its recovery. It should be somewhere that is warm, free from noise, light and free from draughts.
Information should be able to be passed on easily without added noise from barking dogs where things could get missed, as well as leading to the animal having a rough recovery or hypothermia from low environmental temperature (see previous) Dependant on surgical procedure and status Size of kennel, fitting? Need to be taken out? Medical, surgical case? Incubator if available,

**Feeding**

It may be essential to provide the patient with food as soon as possible following surgery. This is especially important in the cases of young, diabetic or small animals. It may be a necessity to withhold food in cases such as patients with pancreatic disease. This needs to be highlighted to all students. The correct type of food should be used; **Chicken and rice based, animals own food, Palatable and easily digestable**. Little and often

This should be highlighted during handover along with the type and amount of food that should be offered.

**More specific requirements**

There will be many more specific areas of postoperative information and care that are needed on an individual basis. These may include:

- Physiotherapy
- Care of chest drains
- Care of urinary catheter
- Eye patients
- Hydrotherapy
- Bandage management
- Chest drains
- Exotic animals

It is vital that all recumbent patients whether recovering from anaesthesia or surgery be turned four hourly to reduce the risks of decubitus ulcers and hypostatic pneumonia.

**Mental stimulation**

A happy patient will have a quicker recovery. This can be achieved by providing them with some form of mental stimulation once they have fully recovered from the anaesthesia. This may take the form of grooming, health
checking the patient or by placing the patient into an area in the prep room (condition dependant) to reduce boredom.

The final stage of a good handover involves the nurse and or veterinary surgeon and client. This is an equally important stage which will ensure all the hard work of recovering the animal is continued. There are many things that a client can successfully perform on their animal as long as they are provided with the correct information and assistance.

The handover to the client should be performed before returning their pet to ensure you have their complete attention. An information leaflet can be an excellent way to ensure all information is provided in written form as well as giving them something to refer to at a later date should they need it. A to do list/sheet may be a good idea to attach to this information sheet with items such as when to feed, when to give medication, and when they will need to return to ensure that nothing is missed. Owner’s compliance is vital and without it an animal can quickly deteriorate and end up requiring further treatment.

**Ask them to repeat to you or show you how it needs to be done to ensure they understand**

If all guidelines and routines are followed efficiently patients recovering from surgical procedures and anaesthetics will have a quick and successful recovery. This will enable them to return to their owners with the best outcome possible.

**References**