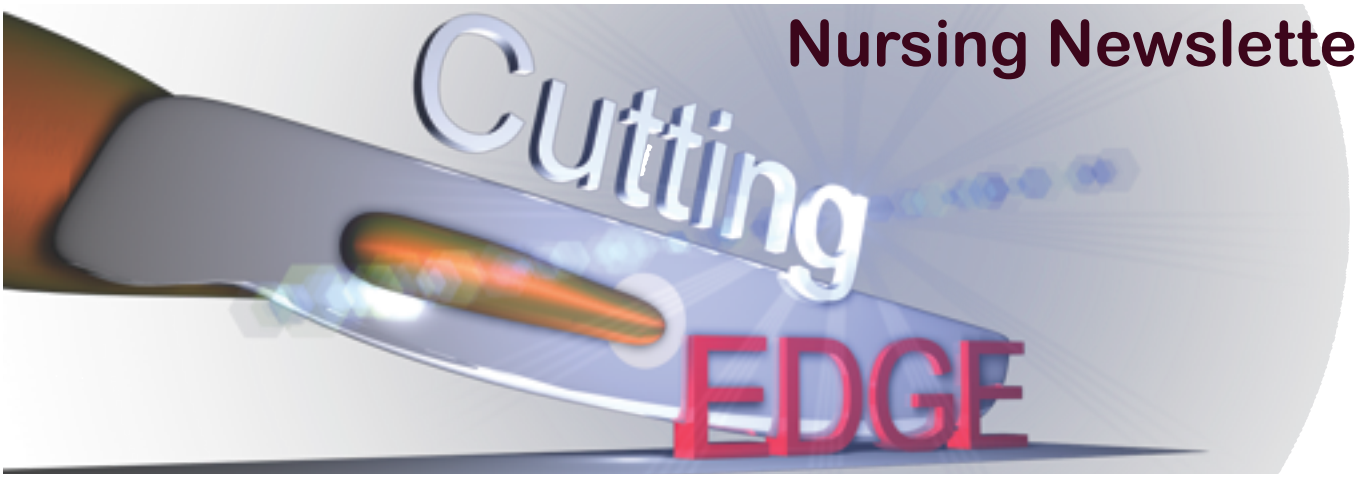


Nursing Newsletter

August 2009 Edition 3

Welcome to the latest Torrington Orthopaedics Newsletter for Veterinary Nurses.

This is the third edition of our quarterly nursing newsletter. In this edition we will be looking at radiography of the hindlimb, how to get good quality, accurately positioned radiographs without too much stress and struggle.

What is required for accurate positioning?

The ability to consistently obtain accurately positioned radiographs helps to reduce the number of radiographs taken, thereby reducing the time taken to get diagnostic images of a patient. In practice, general anaesthesia is almost always required in order to accurately position a patient for the views required. Orthopaedic patients tend to be suffering from painful conditions and therefore general anaesthesia is required to be able to position the patient accurately without distressing either the patient or the nurse.

Taking radiographs on a regular basis can also increase the speed at which you can obtain accurately positioned, diagnostic radiographs - the more you take the better you get! Palpation of the patient is also key to being able to obtain diagnostic images. If you practice palpating the bones and joints you will find accurate positioning easier.

Positioning Aids

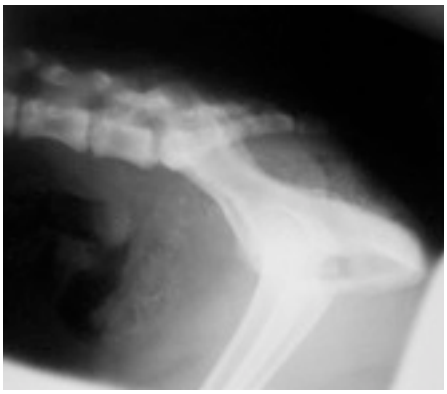
Positioning aids often make it easier to position the patient accurately and obtain reliably diagnostic radiographs. A wide variety of positioning aids are available. If the positioning aid is going to be within the collimated area of the primary beam it should always be radio-lucent e.g. foam wedges, so that vital anatomy is not obscured on the radiographic image produced. If the positioning aid is outside of the primary beam/collimated area it can be radio-opaque e.g. sandbags. Positioning aids should always be used rather than manually restraining patients. It is always possible to position an anaesthetised patient using positioning aids instead of a member of staff risking exposure to the primary beam.

Positioning Aids

- Sandbags (varying sizes)
- Foam wedges (various angles)
- Foam blocks
- Foam sheets
- Limb ties
- Tape e.g. Micropore™
- Vetrap™
- Cradles/troughs

Hips and Pelvis

Well positioned radiographs are essential in the diagnosis of hip dysplasia, and accurate, diagnostic films are required in able to template patients for THR (total hip replacement). Lateral and VD (ventro-dorsal) views with the limbs extended are usually required. Frog-legged views are sometimes taken but these are not particularly helpful in the assessment and diagnosis of hip dysplasia but can be of use in pelvic fractures for example.



For the lateral view of the hips and pelvis the patient should be in lateral recumbency and depending on the shape of the patient, a foam wedge may be required under the abdomen or chest to prevent rotation. Placing a foam pad or block between the hindlimbs will help to keep the femurs parallel and prevent rotation of the pelvis. In some dogs e.g. Greyhounds, it may also be necessary to place a foam pad under the lumbar spine just cranial to the ilial wing to prevent the pelvis from tilting.

For the VD views the patient should be in dorsal recumbency. A trough or sandbags should be used to maintain this position and the positioning aids should be positioned to the side of the dogs chest/shoulders to provide support. If the patient is very thin a foam sheet can be placed under the pelvis to help with positioning and maintain an unrotated position.

When taking a frog-legged view it may be necessary to support one, or both femurs using foam blocks to prevent rotation due to abduction of the hindlimbs. This is the easier of the two VD views to take.

For the extended view of the hips, the hindlimbs should be extended and held in place with a long sandbag. It may be necessary to rest the feet on a foam block if extension is reduced. The stifles should then be rotated medially to prevent outward rotation of the femurs. Vetrap™ or tape is excellent at maintaining this position if placed around the distal femurs, just above the stifle joints. It may also be necessary to place a foam block between the hocks to maintain this medial rotation of the femurs and stifles. Palpation of the ilial wings and the greater trochanters of the femurs will help with accurate positioning and help reduce rotation of the area. Collimation on the extended VD view should include the entire pelvis and the stifle joints.

Upcoming Nursing CPD

Radiography of the Hindlimb

Wednesday 28th October

7.30pm

£10 per person.

Please contact us for further details

The Stifle

The stifle joint is probably the most radiographed joint in orthopaedic practice! It can be difficult to obtain a well positioned, unrotated, medio-lateral image of the stifle without practice. It is important to be able to obtain unrotated lateral views of the stifle to be able to measure the TPA (tibial plateau angle) for TPLO and TTA procedures.

For the medio-lateral view of the stifle the patient should be in lateral recumbency with the stifle of interest down e.g. right lateral for imaging the right stifle. The upper limb should be drawn cranially instead of abducted and secured with a tie. This will help prevent rotation and remove it from the collimated area.

The primary beam should be centred over the femoral condyles, identified by palpation. Collimation should include the distal third of the femur and the proximal third of the tibia. This should be extended to the midshaft of the tibia for pre-operative TTA radiographs to allow for templating of implants.

A caudo-cranial (Ca-Cr) view is usually the easiest to position accurately to obtain an orthogonal view of the stifle. The patient should be positioned in sternal recumbency with the limb extended. Placing a sandbag or foam block under the opposite stifle, and a foam wedge under the hip of the limb being radiographed, can help to prevent rotation in the stifle. The primary beam should again be centred over the femoral condyles which should be identified by palpation. It may also be necessary to tie the tail to the side to prevent it obscuring the joint.

MEGAHIKE Charity Walk

27th and 28th June 2009

Our team managed to raise a total of **£1900** for MedEquip4Kids, by taking part in the 50 mile Megahike. Many Thanks to everyone who supported the Torrington Orthopaedics team.

Thank You from The Team!

Hock Radiography

As with all radiographs orthogonal views of the hock should be taken. Positioning for the medio-lateral view is the same as for the medio-lateral view of the stifle joint. The upper limb can be drawn and held cranially again or can be abducted and tied in position. Abduction of the limb does not rotate the hock joint as it does the stifle joint.

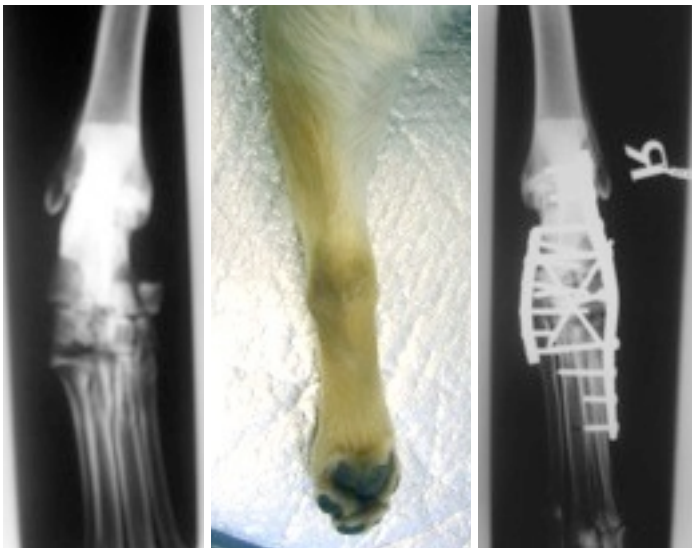
Collimation for the medio-lateral view of the hock should include the distal third of the tibia and the metatarsals.

The plantar-dorsal (Pl-D) view is easier to position accurately compared with the dorso-plantar (D-Pl) view. The patient should be positioned as for the Ca-Cr stifle view, sternal recumbency with the limb extended and supported using the same positioning aids.

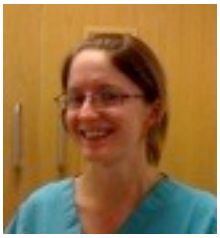
A foam block or wedge under the hip will help maintain the position and again tie the tail to the side to avoid obscuring any vital anatomy.

If assessing joint stability it will be necessary to perform stressed views of the hock. Stressed views are best achieved by using WOW bandage ties. One tie holds the tibia in a fixed position whilst the foot is drawn laterally and then medially. The foot is held in position using another length of WOW bandage during the exposure.

It is also useful to use mammography or fine detail film when radiographing the hock as it is a very complex joint and can be difficult to assess without good exposure factors and accurate positioning.



Meet the Staff at Torrington Orthopaedics



Leanne Wyatt BSc (Hons) RVN - Surgical Team Leader

Leanne qualified in 2006 and joined Torrington Orthopaedics later that same year. She is currently studying for the DipHE Clinical Veterinary Nursing at Myerscough College.

Her interests are surgical nursing and theatre practice. She is also in charge of infection control within the practice, regularly performing environmental swabs to ensure our standards of hygiene and sterility.

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