

Post-operative care for patients after surgery for a ruptured diaphragm

The diaphragm is the muscle that separates the chest from the abdomen. It is the main muscle used during breathing. During trauma like falls from a height or involving vehicle collisions, the diaphragm can tear or rupture. This lets abdominal organs like the intestines, the spleen, or parts of the liver move into the chest where they occupy space. This leaves less space available for the lungs to fully inflate. With ruptured diaphragms, some patients are in severe respiratory distress and some are not visibly affected. It is unusual, but far from unknown, for cats and dogs to live with ruptured diaphragms for years before diagnosis, without obvious ill effects. Where abdominal contents have been in the chest for long periods, adhesions may have formed, making it harder to get the abdominal structures back out of the chest. When the diaphragm is ruptured the heart sounds will often be muffled when we listen with a stethoscope. Chest X-rays usually clinch the diagnosis.

Repairing the ruptured diaphragm surgically is usually straightforward, though it can be a challenge when the tears are awkwardly situated. The real crux of these cases is managing the general anaesthetic as these patients can't breathe for themselves while their body wall is open to allow the diaphragm to be repaired. The anaesthetist has to ventilate their lungs for them using either a bag on the anaesthetic circuit or a ventilation machine. Published perioperative mortality rates are in the region of 10%, but most cases do very well. Your pet will be kept hospitalised until we are confident that all is well and that breathing is normal.

Any breathing difficulties after discharge should be viewed as an ACUTE EMERGENCY. Seek our advice immediately.

Medication:

Antibiotics: We usually dispense claviseptin (tablets given twice daily).

Anti-inflammatories: We usually dispense carprofen (tablets given twice daily), or meloxicam (a liquid given once daily). These are given with food. They occasionally cause vomiting or diarrhoea, in which case prompt advice should be sought.

Analgesics: We sometimes dispense tramadol, (tablets given twice daily).

The wound must not be interfered with or bathed. An Elizabethan collar can help prevent interference with wounds. Any ooze may be gently blotted with kitchen towel, but if ooze is seen, advice should be sought.

Rechecks a few days after surgery may be with your own vet to save un-necessary travelling. We can do this check-up where travelling is not an issue, and all check-ups are free of charge with us under our "fixed price" schemes. Please contact us to book an appointment for us to see the case back 2-3 weeks post-operatively when we can remove sutures/staples and check that all is going to plan.

Dressings may be used post-operatively, typically a thin white Primapore, to give the wound(s) some on-going protection. These should be kept dry at all times. If they do become significantly wet then they can be removed.

Strict restriction and supervision of activity is required for two weeks post-operatively while the diaphragm wound and the body wall incision heal. Dogs should be on a lead anywhere outside of the house including the garden. Allow just 5 minutes of lead restricted exercise, three times a day, until you are advised to the contrary. Cats should be confined to a cage. Cages which will fold flat when not in use are readily available from pet superstores, Argos, many DIY stores or from on-line retailers. Cats can be allowed several short periods of supervised walking around the kitchen each day. For both species, running / jumping / climbing (into cars, upstairs, onto furniture, onto kitchen work tops etc) should be prevented. Consider using stair gates and ensure that doors and windows are shut to avoid escapes!

Complications

Reinflation syndrome can occur when the lungs are reinflated after having been underinflated for a period of time. The lung tissue becomes "water logged", and this reduces effective gas transfer across the lung membranes. Weakness, increased breathing rate, shortness of breath would be typical signs. This complication can be serious but if medical treatment is successful, the lungs recover.

For further advice please contact us by phone on 07944 105501 or at mail@wm-referrals.com