

Hernias - Umbilical & Inguinal

By Dr Michael Bell

What actually is a hernia?

A hernia is defined as a protrusion of an organ or part through a defect in the wall of the cavity in which it lies. Most hernias involve a protrusion of the belly wall or diaphragm.

Hernias are classified according to anatomical site (i.e. where they occur in the body), whether they are congenital or acquired, whether they are reducible/incarcerated/strangulated and what type of tissue is inside the hernia. Congenital hernias are due to a defect already present at birth (even though the hernia may not develop until later), whilst acquired hernias occur after birth and can be caused by trauma (e.g. car accidents), surgical trauma or tissue degeneration. Hernias are known as reducible where the protruding contents are freely movable and can be readily repositioned manually back into the cavity from where they come. Where adhesions form between the contents and surrounding tissue and the contents are fixed in the trapped location the hernia is classed as incarcerated (i.e. irreducible). A strangulated hernia occurs where the blood supply to the tissue is obstructed, this can become very serious when intestinal loops are involved and the tissue starts to die due to the poor blood supply.

What are the parts of a hernia?

A hernia consists of 3 parts:

- (i) the ring - this is the actual defect in the wall and can vary from several millimetres to several centimetres in size. The bodies attempt at healing the defect can lead to thickening of the edge of the ring
- (ii) the sac - this is the tissue lining the herniated contents
- (iii) the contents - these are the organs or tissues that have protruded into the sac

Umbilical hernias

How are they caused?

In the developing embryo the abdominal wall is formed by migration of 3 tissue folds, and the umbilical opening which serves as a passageway for the contents of the umbilical cord remains after normal migration and joining of these folds. Congenital umbilical hernias result from failure or delayed and joining of the above mentioned folds at the umbilicus during the fetus development.

Most umbilical hernias are believed to be inherited and it is not uncommon for cryptorchidism (retained testicles) to exist in dogs with umbilical hernias. Acquired causes of umbilical hernias are uncommon. They can occur through excessive traction on the umbilical cord during whelping or from severance of the umbilical cord too close to the puppies umbilical cord. Also non-detectable congenital umbilical hernias may suddenly become visible in adult dogs due to increased pressure in the abdomen as a result of obesity and trauma.

Overall umbilical hernias are the most common form of abdominal hernias in dogs with Airedale Terriers, Basenjis, Pekingese, Pointers and Weimaraners being more at risk.

What do they look like?

Normally umbilical hernias present as soft, round masses located at the umbilicus, although if fat becomes trapped and irreducible the swelling may appear firm. In very odd cases where acute signs of vomiting and diarrhea occur and a firm, painful, irreducible mass is present at the umbilicus the dog may have entrapped gut causing an obstruction.

How are they treated?

Most small, reducible hernias contain only fat and are of little significance health wise. Initially it is often best to treat such puppies conservatively as spontaneous closure has been known to occur up to 6 months of age. The decision on whether umbilical hernias should be repaired or treated conservatively is based on the risk of complications - hernias the width of on finger in small to medium sized dogs with large hernia sacs in dogs over 6 months of age are at risk of gut strangulating and should be surgically repaired, smaller defects or those that are much larger generally do not represent a great risk and can be repaired during other elective surgeries or treated conservatively and carefully observed.

During routine surgical repair the hernia sac is freed from the overlying skin. Any abdominal contents are repositioned into the abdomen and the sac and any fatty tissue are examined. Where the edges of the hernia are scarred they are trimmed and the muscle tissue is stitched closed.

Next issue I will endeavour to deal with groin hernias.