

HOG-UPDATE

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Belly Ruptures

By Ben Dekker

Recently there has been much negative press surrounding belly ruptures in grow finish pigs. Not only are belly rupture hogs more likely to bring lower returns to the farm, they are now attracting the attention of the CFIA. What can producers do to help control the number of belly ruptures on the farm?

Although there is not a lot of research in this area, we know that most ruptures originate at birth, and preventative treatments have been used on many farms over the years with good success.

Abscess or Rupture?

Many belly bulges found early in the pig's life are actually abscesses and these do not really get huge as the pig grows. Flip pig upside down and bulge does not disappear into belly cavity.

With a true belly rupture, flip the suspect pig upside down and the bulge falls back into the belly. You can feel a defined "rim" in the musculature.

Infection of umbilical cord causes inflammation and persistent swelling of umbilical stump which prevents the navel opening from properly closing, or an abscess which persists, or both.

Weakness and herniation only become apparent after weaning in most cases. As pigs eat more solid food, intra-abdominal pressure pushes the hernia out bigger and bigger.

Prevention starts at birth

Drying powders on heat mat before pigs are born encourage the navel to dry up as quickly as possible at

birth. Less fluid equates to less bacterial growth.

Antibiotics probably have most effect if given at birth. Although many producers have mixed iron and penicillin as a strategy to combat infection, there are some related problems. If antibiotics are combined with iron and used at birth, we need to be careful about giving too much iron on day 1 if iron dextran is used. 200 mg may not be a great idea for larger number born alive and therefore lower birth weight pigs.

Current recommendations are regular penicillin at birth and iron given at day 3 to avoid iron problems. Penicillin seems to be the antibiotic that is giving the most consistent results.

Always consult your herd veterinarian.

In summary, producers need to focus on clean dry farrowing area, using a drying product on newborn pigs if possible, and a preventative strategy of penicillin treatment to help avoid belly ruptures.

Umbilical Hernias

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Umbilical hernias, commonly referred to as belly ruptures, can occur in both male and female pigs with a prevalence ranging from 0.4 to 6.7 % in swine herds (Straw et al, 2009). Umbilical hernias result from a failure of the umbilical opening or ring to close properly after birth, thus allowing the intestines to protrude through the abdominal wall.

Although there is likely a genetic component to the cause of these hernias, environmental factors such as abnormal stretching of the umbilical cord during farrowing and umbilical infections may contribute significantly to this anatomical defect.

In a paper by Straw et al, 2009, the authors reported the results of a study in a commercial setting where the performance and mortality of pigs with umbilical hernias was compared to unaffected pigs. Not surprisingly, pigs with umbilical hernias had a higher mortality and a slower growth rate than unaffected pigs. However it was interesting that neither mortality nor growth rate varied with the size of the umbilical hernia (i.e. small, medium or large). The authors questioned the placement of these herniated pigs in the finisher when factors such as poor performance, higher mortality, pig welfare (abdominal discomfort) and potential carcass condemnation are considered.

In addition, according to the Guidelines for


Transporting Pigs, pigs with umbilical hernias that impede movement or touch the ground should not be loaded or transported.

As mentioned previously, umbilical infections may be associated with the incidence of umbilical hernias. A study conducted by Reiman et al showed that certain pathogens are directly correlated to navel infections. These researchers found the most common isolates to be *E. coli* (non-hemolytic), 13.7%, *Staph hyicus*, 12.4%, and *Enterococcus spp.* In addition to potentially being at higher risk of developing umbilical hernias, pigs with bacterial infections of the umbilical stump are more likely to have arthritis at weaning.

In an attempt to minimize environmental causes of umbilical hernias, proper sanitation and hygiene in the farrowing room may be beneficial.

- ✓ *Farrowing crates should be thoroughly cleaned, disinfected and dried between farrowings.*
- ✓ *The use of a drying agent in the crate at time of farrowing may help in reducing bacterial challenge.*
- ✓ *Disinfection (e.g. iodine) of the umbilical cord shortly after birth may be of value.*

Your herd veterinarian may recommend an injectable antimicrobial be administered within 24 hours of birth. Studies by Vestergaard et al and Reiman et al both found that the administration of an antibiotic within 24 hours of birth reduced the incidence of umbilical hernias significantly. Criteria such as spectrum and duration of activity may be considered when selecting an injectable antibiotic for this purpose.



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Swine Disease Notice – Feb 14, 2013

The Animal Health Laboratory, University of Guelph has recently diagnosed two case of swine dysentery in southwestern Ontario.

Swine dysentery (SD), also known as bloody scours, is an infection of the large intestine of pigs caused by the bacterium *Brachyspira hyodysenteriae*. Swine dysentery has been present in Ontario for many years. The prevalence of this disease greatly decreased with changes in production practices and improved biosecurity practices through the 1980s and 1990s. There has not been a confirmed case in Ontario since 2008. In the past several years there have been cases in the US and Western Canada associated with *Brachyspira hyodysenteriae* as well as a new strain that has been named *Brachyspira hampsonii*.

The two Ontario cases are both due to *B. hyodysenteriae*.

The new strain has not yet been identified in Ontario.

The cause of the *B. hyodysenteriae* infection in the two herds is unknown but it is likely that this bacterium has been present at low levels in the province continuously. The disease causes diarrhea in finisher pigs that may be bloody. It can be easily confused with other diarrhea, such as ileitis. Swine producers should notify their veterinarian if signs of diarrhea are observed in growing pigs. Establishing an accurate diagnosis is critical to effective treatment of the disease as well as ensuring that appropriate biosecurity measures specific to this infection are in place.

The low prevalence of *B. hyodysenteriae* in Ontario and Canada provides an opportunity for creating an industry strategy for control of this disease. Effective biosecurity is crucial to ensuring this disease does not become widespread in the Ontario of Canadian swine population. Biosecurity is extremely important in preventing transmission from infected farms. Infected pigs are the primary risk for SD, thus pigs and pig trucks are the main concern. Rodent control is also important. If a herd tests positive for *B. hyodysenteriae*, an important biosecurity measure is to ensure that the producer communicates this information to all of their suppliers to reduce disease spread from the infected farm.

It is very important that our industry understands these may not be the only *B. hyodysenteriae* infected herds in the province and that further cases will not be unexpected. Producers should notify their veterinarian if signs of diarrhea are observed in growing pigs.

Link to more information on Swine Dysentery:
<http://www.swinehealth.ca/DysenteryBulletinE.pdf>