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THE CASE OF THE BANGED-UP

When a number of young bulls came up lame on a farm, it took the elimination of many options before trauma was determined to be the cause

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RECENTLY, I WAS CALLED to examine a group of seven bulls ranging in age from five to seven months old of which two were lame. The bulls had been weaned one month prior to my arrival and on the day of weaning had been moved to a different farm.

On the day of weaning, and for the first week postweaning, no lameness was observed. However, after the first week, four of the seven bulls were lame and all were lame on the front left leg. No treatment had been administered to the lame bulls in the three weeks between the onset of the lameness and the call for my visit. However, by the time I was called to the farm, two of the four lame bulls had recovered with two bulls still favouring their front left legs.

Thinking back to my classroom days the lectures and notes on bovine lameness ran through my head. First I recalled the general rule of lameness: 90 per cent of lameness is in the hoof (not the leg, shoulder, or hip), 90 per cent of lameness in the hind feet is in the outside claw, and 90 per cent of lameness in the front feet is in the inside claw.

Next, I recalled the three main types of lameness generated in the hoof, their causes, and treatments:

- * Foot Rot -appears as swelling, heat, and pain due to an infection that has gained access to the deep tissues between the claws or around the hoof. This type of foot rot requires a break in the skin of the interdigital space to allow bacteria access to the deep tissue, sue, usually in the form of a piece of steel, stones, or sticks which penetrate the skin. Systemic antibiotics and cleaning of the wound, early in the onset of the condition, are required for a complete recovery of this type of foot rot.

- *Unlikely in these bulls as there was not swelling or heat in any of the bull's hooves.

- * Interdigital dermatitis or Heel- Horn Erosion -appears as a superficial infection usually accompanied by a fetid smell at the junction between the hoof wall and the skin, between the claws and/or on the bottom/ back side of the hoof. Initially, this condition only affects the superficial layers and usually no visible signs of lameness are evident, but if left untreated it can go deeper and lameness can develop. It results from animals repeatedly walking/standing in wet, muddy, manure laden environments. If only the superficial layers are infected, cleaning and drying the lesion (and the environment) are the only treatments needed and it should heal on its own.

- *Unlikely in these bulls as they live in a dry-lot with access to a pasture that has been extremely dry all summer.

- * Digital Dermatitis aka Strawberry Foot Rot/Hairy Heel Wart -is a contagious infection

that also affects the skin at the junction of the skin and hoof-horn . Typically the lesion is circular in nature at its onset and can proliferate to form a "strawberry"- like growth. Topical treatments are generally accepted as the treatment of choice for these lesions.

- *Unlikely in these bulls as no

- "strawberry" growths were observed on the back side of the feet.

I recalled a few other less common types of lameness I have observed in beef animals that are generated in the hoof:

- * White Line Disease -results from the separation of the hoof wall from the sole. The exact cause has not yet been determined, but one theory is that it can be a result of excessive trauma due to animals walking on rough uneven ground or from excessive slipping while walking.

- *Unlikely in these bulls as they are lighter weight animals that were walking on a dry paddock and level pasture. It would also be very unlikely that all four bulls would have the same lesion on the same leg!

- * Hemorrhage- results from trauma to the corium (the tissue that grows horn). Typically this trauma occurs due to pressure from the inside of the claw not the outside.

- *Unlikely in these bulls as the chances

- of all four bulls hurting the same claw around the same time is minimal.

- * Cork-Screw Claw -a heritable condition where the bone inside the claw has rotated causing the outside wall horn to grow inwards causing a corkscrew shaped hoof

- *Unlikely in these bulls as the condition is not usually apparent until the animal is mature.

- * Sandcracks -the exact cause is unknown. These lesions are cracks that run from the skin-hoof junction on the front of the hoof and can extend all the way to the tip of the toe.

- *Unlikely in these bulls as the condition is usually observed in heavy older animals.

I quickly realized that I was not dealing with the "90 per cent of lameness is found in the hoof" and that I must look at the other 10 per cent of lameness that does not deal with the hoof.

- * Septic joints -observed as swollen, hot, and painful joints. Generally a secondary result to a primary infection somewhere else in the animal e.g. umbilical infection, pneumonia, etc.

- *Unlikely in these bulls because they have had no history of illness and two bulls have resolved the lameness on their own (without treatment).

- * Nerve damage (Paralysis) -physical signs differ depending on which nerve is affected and by how severely it is damaged. If the radial nerve of the front left leg was damaged the animal would exhibit an inability to move the leg which would be evidenced by dragging of the limb.

- *Unlikely a radial nerve problem, in these bulls because they were not dragging their front leg, they appeared sore and were only putting medium to light pressure on the front left leg. However, in these lame bulls there could still be damage to a different nerve that runs in the same area (as per the next option, below).

- * Trauma or fracture -wide array of symptoms depending on what muscle/bone/joint was affected. Symptoms also depend on the severity of the trauma/fracture.

- *Now we are getting somewhere! After further questioning the producer, it was stated that for the first few weeks of the bulls living at their new paddock, when the bulls left the small barn in the paddock, rather than saunter straight out the door the bulls all ran out of the door at the same time...and for some reason they all seemed to think they needed to turn LEFT as they headed out the door. The producer had observed on numerous occasions where multiple bulls had pushed and banged other bulls to get out the door and to turn left first.

He also noticed that the "inside" bull (the one closest to the left door frame) usually was the last one to leave because his shoulder was jammed against the doorway. The degree of lameness that was observed in these bulls most likely varied due to the amount of trauma they sustained when mass-exiting the barn.

This explains why two of the bulls had already recovered from their lameness without treatment. They had probably experienced a lesser degree of trauma. The two bulls that were still lame were moved into another barn, put on deep-bedded packs in small stalls, and received anti-inflammatories for a week. Both bulls have improved dramatically and are being kept on "stall rest" for another month. The actual cause of the lameness was not determined but the pain in the leg was stemming from the shoulder joint...I suspect there may have been either a fracture or crack to the supraglenoid tubercle (the distal end of the scapula which articulates with the head of the humerus), damage to the suprascapular nerve, or some other soft tissue damage to the joint which caused the obvious lameness in these bulls.

Only time will tell if these two bulls make a full recovery and if they go on to be productive breeding stock.