

Cowslips - The Alternative to the Foot Block

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In the treatment of bovine digital lameness the practitioner must consider three general areas. These are speed of resolution of the lesion, reduction in pain and improvement in the welfare of the animal, and the cost of treatment. The latter category should include the cost of any drugs or other materials used and the labor in their application.

Sole ulcers and white line lesions are generally regarded as being of traumatic and metabolic aetiology, with secondary bacterial infection only becoming important in the later stages. After initial surgical paring to remove under-run and diseased horn, exposing the healthy corium, treatments originally recommended the use of topical dressings. Often astringent materials such as copper sulfate were applied to sole ulcers, to cauterize and remove protruding granulation tissue. Many practitioners now consider that this is unnecessary, if not contra-indicated. The astringent might cauterize the granulation tissue, but it can also damage the underlying corium, thereby retarding the growth of new horn. In addition, the presence of a bandage and dressing may put unnecessary pressure on an area (the ulcer) which needs to be relieved from weight-bearing in order to improve healing.

In the UK it is now very common to leave the corium exposed, without any dressing (Blowey 1993). Even when exposed to a heavy fecal environment contamination, healing does not appear to be retarded. However, in order to promote healing, a variety of prosthetic devices have been applied to the sound claw. This removes weightbearing from the affected claw. Not only does this improve the rate of healing, but it also has considerable benefits for cow welfare. In many cases, by almost immediately alleviating the lameness, the cow is brought back into full production and this obviates the need to pen her separately.

The type of block used is partly a matter of personal preference. Initially tie-on shoes were tried, but they were not easy to keep on and by retaining the exposed corium inside a dressing, the moist environment seemed to retard healing. Nail-on rubber blocks and

wooden blocks which could be glued on have both been used. Nail-on blocks are cheap and in experienced hands can be applied quickly. However, there is the risk of a rogue nail penetrating the corium, producing lameness, and even when this does not occur, many practitioners are unhappy about the nail damage to the hoof wall. When a nail-on block works loose, it can cause discomfort to the cow. Wooden blocks glued to the sound claw produced an excellent support for the foot, but were not always easy to apply, particularly in colder climates where the glue was slow to set.

In the UK a molded PVC shoe ("Cowslip" -Giltspur Ltd.) has recently become very popular. This shoe is very easy to fit and seems to have several advantages over other products on the market. These advantages are:

- the glue (a standard powder and solvent) can be easily mixed in the shoe, thereby eliminating the need for a mixing vessel
- when the block is applied, the wall of the shoe holds the semi-solid adhesive in position, preventing excess glue dripping off the foot. This makes application much easier.
- Because the shoe is firmly attached to the wall of the hoof by the adhesive, weightbearing is taken partly on the wall. This is clearly better than weightbearing on the sole of the hoof only.
- The solvent/powder mixture sets quite rapidly. This is a big advantage in colder climates, such as UK winters. If a product is easy to use, then it is more likely to be used. This would account for its increasingly common use in the UK.
- The rate of wear, particularly at the heel, seems to be less than with wooden blocks

There are several practical points to consider when using Cowslips. To achieve good adhesion, it is essential that the hoof should be thoroughly cleaned. This can be achieved by scraping the hoof (sole and wall) until it is totally clean and dry. Access to the axial wall is facilitated by packing a small roll of paper towel into the interdigital cleft, thereby splaying the claws apart.

The sound claw must be trimmed to fit the Cowslip, so that the rear edge of the Cowslip supports the weight of the heel of the sound claw. Failure to do so may lead to posterior rotation of the foot, resulting in discomfort to the cow and excessive wear on the rear of the Cowslip. In some large bulls the claw is so big that a Cowslip cannot be used.

When adding solvent to powder, ensure that all the powder is thoroughly mixed. The presence of dry powder at the toe of the Cowslip leads to poor adhesion.

It has been recommended that any foot block should be removed after four weeks (Toussaint Raven 1985) and the sound claw trimmed to restore normal weightbearing. However, the Author has treated numerous cases where blocks have remained in place for two to three months thus allowing optimum time for the resolution of slow-healing lesions such as sole ulcers. The PVC Cowslip appears to wear down much more

slowly and excessive wear at the heel is certainly less than with wooden blocks. No adverse effects have been observed due to Cowslips being left in place for this period of time, although some have to be removed sooner, and others fall off.

Removal of Cowslips is easily achieved by clipping the wall/sole junction of the Cowslip from heel to toe. With a little experience it is easy to judge the correct depth, so that only the Cowslip and the underlying glue is removed and the wall of the hoof remains intact.

References

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Abstract

Effect of Gn-RH and prostaglandin treatment of dairy cows with cystic ovaries

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A field clinical trial was conducted to investigate the impact of PGF₂α on cows with luteinized cysts following treatment with Gn-RH. Seventy cows with follicular cysts diagnosed by rectal palpation were injected i.m. with 20 µg Gn-RH (Receptal). Luteinization of follicular cysts were tentatively diagnosed by rectal palpation; thirty eight cows were considered to have luteinized cysts and were either treated i.m. with PGF₂α (27 cows) or left untreated as controls (11 cows). Thirty-two other cows were considered to have not responded to Gn-RH and retreated with hCG (12 cows) or Gn-RH (20 cows). This tentative diagnosis or judgement of luteinization of the cysts by rectal palpation after treatment was later confirmed by determining serum

progesterone concentration before and 10 to 14 days post treatment. Only in the cows with luteinized cysts that were confirmed by determining serum progesterone analysis, the effects of PGF₂α combined with Gn-RH were investigated. Of the 15 cows with luteinized cysts that confirmed following Gn-RH injection and treated with PFG₂α, 14(93.3%) came into estrous within 22.3±8.6 days after treatment and 12 cows (85.71%) conceived within 90 days (32.3±19.3 days). On the other hand, the 7 control cows with luteinized cysts that were not treated with PGF₂α required significantly longer time to exhibit normal estrus (56.1±12.2 days); (P<0.05) and to conceive (58.3±10.2 days).