

Serious Lameness Caused by ‘Sand Cracks’

Menno Holzhauser*

Royal GD Deventer, The Netherlands

***Corresponding Author:** Menno Holzhauser, Royal GD Deventer, The Netherlands.

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Since 2002, a national cattle health surveillance system (CHSS), developed and managed by Royal GD Animal Health, is a place that consists of several surveillance components. The CHSS combines enhanced passive reporting, diagnostic and post-mortem examinations, random surveys for prevalence estimation of endemic diseases and quarterly data analysis. The aim of the data-analysis component is to monitor trends and developments in cattle health using routine census data [1]. Working on the bovine department of Royal GD/Animal Health, CHSS received in June 2020 from different veterinary practices questions about cows suffering from severe lameness. Where the far majority of questions at the bovine department is about dairy cattle, it was remarkable that these questions concerned suckler cows, which suffered from severe lameness for different years in a row due to a problem at of the front claw. Although the majority of the cows are probably not serious lame, these cows were, most probably as a consequence of secondary infection (See photo 1) [1]. These cows showed extreme lameness and treatment was not simple without the help of a well equipped claw trimmer.



Photo 1: Typical example of a sand-crack in a five years old suckling cow.

This condition is described in international literature as vertical horn wall fissure (https://www.icar.org/ICAR_Claw_Health_Atlas.pdf) or sand crack [2,3]. It is actually a vertical fissure on the front of the claws of the front leg with often a bulging of the pododerma (See photo 1). The cows in the here described cases were pastured on well drained compacted soils typically seen in older cows. This is in line with a Canadian investigation that concluded a higher risk for heavy cattle breeds, in good condition on compact soils [3].

Based on information of the farmers, the heredity was checked and one herd had different cows with the same father and the other did not. The treatment consists of relieving the pressure from the edges on both sides of the fissure and the application of a bridge. Because the horn of those walls is of hard, good trimming is not easily. Therefore, the claw trimmer visits during more than 1 month weekly, to repair the lesion.

Experiences in other countries

Knowledge from other countries, points to a partly hereditary relationship in these cows. On a larger suckler cow farm in Sweden with 1,700 suckler animals, this condition was seen in 1 - 2 percent of severely lame cows. At this farm there was a clear relationship with the occurrence of "sand cracks" and the same bull as father. This farmer has solved the problem through selection, that is to say, removing or excluding for breeding and the removal of offspring present for slaughter. Whether it was hereditary is still being investigated (Bergsten personal communication). In the Dutch cases a clear indication for hereditary was not seen. Some studies reported a positive effect of biotin supplementation on farms with beef bulls and a higher prevalence [4,5,7] but this effect was not seen in other studies [6]. What was clear in these cases that, as in far most claw disorders in cattle, there is hardly an indication for the use for antibiotics. An exception is the presence of interdigital phlegmon, when rapid reaction with parenteral antibiotic application is advised, although there are also some reports that find a positive effect of early application of acetyl-salicylic acid unguent [8].

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