



² Department of Clinical Sciences, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Iran.

Lameness have known as the most important problem in dairy cattle welfare and economic losses and got the third place after infertility and mastitis. Different incidence of lameness has been reported base to different production, climatic, management conditions. Knowing the overall incidence of different lesions that resulted in lameness can play an important role in understanding current situation and making targets for control and management of the conditions.

This current study was done to detect the incidence of hoof lesions in Iran. Four industrial dairy herds were selected in different parts of Iran. With 933 to 4490 productive cows (milking and dry) cows, in different climates from very cold to hot and low to high humid weather. Cows were milked three times a day and received total mix ratio. Cows were housed in loose stall to free stall barns. Hoof care program (by a veterinarian) started at least 5 years before start of the study. Hoof trimming was done on the following basis; each cow was trimmed two times a year as one time is immediately before drying and the other is around 100 days after parturition. In addition to normal hoof trimmings cattle with locomotion scores 4 and 5 on a five point scale, repeat breeders and referral cows also referred to trimming for detection of any possible lesion in the hoof.

Data were recorded in a hoof trimming record sheet, and finalized in excel sheet and management software of the farms. Injuries recorded by its affected zones (1-12). Sole Ulcer (SU), toe ulcer (TU), white Line disease (WLD),

digital dermatitis (DD) and interdigital necrobacillosis (INB) were notified in this current study. Information recorded from March 2012 to February 2014 (two years). The annual incidence of each lesion and overall incidence of the lesions were reported. Total of 20000 cows were evaluated with 132000 times of inspection in this period. The overall incidence of the lesions was different between farms (14.34 – 61.89%). The most prevalent lesion was sole ulcer among non infectious causes and digital dermatitis among infectious causes. The most prevalent lesion was digital dermatitis in three out of four farms. The overall annual incidence of lesions recorded as 31.75%. The annual incidence of each lesion in Iran recorded as 9.70% for SU, 1.53% for TU, 5.75% for WLD, 11.66% for DD and 3.00% for INB.

Toe ulcer incidence and cure rate in a dairy herd

Amir Nejati¹, Iman Ebrahimi², Majid Jadidi³, Ahmadreza Mohamadnia⁴

¹ Private practitioner, professional hoof trimmer, Mashhad, Iran. DVM..amir@gmail.com

² DVM. student, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Iran.

³ Private practitioner, professional hoof trimmer, Karadj, Iran.

⁴Department of Clinical Sciences, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Iran.

Lameness is a multifactorial condition. Primary causes include infectious agents (e.g., foot rot), laminitis, conformational or other lesions (e.g., corkscrew claw, leg injury); and claw lesions such as white line disease, thin sole-induced toe ulcers, sole ulcers, heel ulcers, toe ulcers, sole punctures, and thin soles. Compression of the corium between the sole and third



phalange can result from over trimming or inflammation and rotation of the phalange due to laminitis. This compression can cause the formation of ulcers in the apical region of the sole. These lesions are typically found in the apical portion of the sole adjacent to the abaxial white line in zones 1 and 5 of the sole.

This current study was done in a dairy herd with 890 productive cows (including milking and dry cows). The study was done during 32 month period started from June 2013 till January 2016. All cows housed in free stall barns and milk three times a day. The average production of the cows during this period recorded as 39.3 lit/day. Hoof care programs including regular hoof trimming by veterinary practitioners and skilled hoof trimmers was done as the cows at least trimmed two times a year and total 4 times including different inspections and treatments referred to hoof trimming chute. Data of days in milk, milk production, parity recorded in all cows in addition to the records of the diseases. The toe ulcer (TU) located in zones 5 and 1 of the hooves selected. Total of 91 cases of TU were recorded with an annual incidence of 6.74%. The average milk production in the affected cows recorded as 32.95 ± 10.82 that were not different from the average production of the herd during the same period. Cows affected with this condition (mean \pm SEM) were in days in milk 216.77 ± 17 that varied from 9-666 days. The average healing time in treated cows recorded as 90.3 ± 7.56 that varied from 14-503 days and 1.94 ± 0.12 blocks were used for treatment. The average cure rate in cows with days in milk (DIM) less than 100, between 100-200 and more than 200 days recorded as $102.54 \pm$

21.26 , 80.85 ± 9.41 and 89.52 ± 9.83 respectively. Occurrence of the toe ulcer in different days in milk did not affect its cure rate significantly ($P > 0.05$).

Using metabolic profile test as a predictor of lameness indices and hoof lesions in dairy cows

Mohamad Riahi¹, Ahmadreza Mohamadnia², Mehrdad Mohri², Hesamodin Seifi²

¹DVM, graduate, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Iran.

²Department of Clinical Sciences, Faculty of Veterinary Medicine, Ferdowsi University of Mashhad, Iran.

Lameness is the third most important factor affecting economic losses after mastitis and infertility in dairy herds. Lameness plays an important role in increasing culling rate, mastitis and decreasing reproduction performance. One of the most important factors, causing non-infectious lameness, are metabolic disorders, which are more important around parturition and peak of lactation. Some of these disorders can be assessed through metabolic profile test (MPT). MPT by measuring energy, protein, and mineral indices, aids in diagnosis and prediction of such disorders.

In this study ability of MPT findings in predicting lameness and non-infectious wounds in hooves were evaluated. The study took place in a dairy farm with 4200 milking cows and MPT was performed 8 times through 2 years.

Five groups of cows were selected for sampling: fresh cows in second parity and higher, fresh heifers, high producers, moderate producers, and close-up cows. The following metabolites were measured in Sera of