The Sesamoid bones are developed along the course of tendons or in the joint capsules at points where there is increased pressure. This study was carried out to find out the radiographic and morphometric characteristics of proximal sesamoid bones in camel. 20 digits of forelimb and hind limbs (right and left) of camel were collected from the Marvdast slaughter house. Standard radiographs of latero-medial, dorso-palmar or dorso-plantar views were obtained from each specimens. Also each specimen was dissected and following the gross anatomical study of the position of sesamoid bones, the length and width of each sesamoid bone was measured. This study revealed that the proximal sesamoid bones were elliptical shape with high sagittal diameter and palmar or plantar convex surface and dorsal concave surface. These sesamoid bones were placed at the flexor side of the metacarpo-phalangeal joint. There was a significant difference in length and width of sesamoid bones of digits between left and right forelegs and hind limbs. But there was no significant difference in dimensions of these sesamoid bones in fore limbs in comparison to hind limbs. The proximal sesamoid bones in camel are similar to that of the cattle both radiographically and morphometrically.

Occurrence of *Onchocerca reticulata* infection in the deep digital flexor tendon in a horse; a case report

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*Onchocerca reticulata* is a parasite of horses, mules and donkeys. Adult worms are found in the connective tissue of flexor tendons and suspensory ligament of the fetlock, mostly in the forelimb. The prevalence of *Onchocerca* sp. infection in horses increased with age. In a survey ten percent of horses less than one year old were infected, 28% of horses one to five years old, 48% of horses six to 15 years old, and 90% of horses over 16 years old. The adults live and breed in subcutaneous fibroid nodules. The young (the microfilariae) are carried by the lymph and are found chiefly in the skin, subcutaneous connective tissues, and eyes. A research was conducted on 10 adult indigenous Iranian horses from both sexes. Tissue sections were processed routinely; for histopathological evaluation from deep digital flexor tendon of forelimb. Observation of the specimens revealed that in one of the DDFT there is some nematodes named *Onchocerca reticulata*. In horses, new infections with *O. reticulata* may cause swelling of the suspensory ligament, DDFT and SDFT, and a hot edematous swelling of the posterior part of the cannon which persists for 3-4 weeks. After the swelling subsides, the suspensory ligament remains thickened and small, calcified nodules may be palpated. Affected animals are lame while the area is edematous and swollen, but many recover when the swelling disappears.

Case report: Report of congenital syndactyly (mulefoot) in cattle

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syndactyly in cattle also known mulefoot is a rare malformation which is inherited as an autosomal recessive trait with variable penetrance in different cattle breeds. Mulefoot refers to the fusion or non-division of the two developed digits of the bovine foot. The variable expressed syndactyly phenotype in cattle is most often seen in the front feet, but all four feet underlying a right-left and front-rear gradient may be involved. The bovine syndactyly consists mainly of pairs of horizontally synostotic phalanges and adaptive structural changes develop proximal to the fused digits. A 7 days old Holstein female calf with clinical signs contain: stiffness during walking and weight-bearing on toes, syndactyly was observed in all of its limbs. No other congenital malformation was observed and it had normal appearance. Radiograph in DDI, DDI and Lateral were taken and radiograph findings were include: Absent proximal sesamoid bone, complete fusion in midline phalanx, compact single pedal bone.

Fluid analysis of distal sesamoid bursa and distal interphalangeal joint in fresh normal cadaver foot and comparison with normal alive in cattle

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Synovial fluid analysis is a group of tests that examine joint (synovial) fluid. Physical, cellular and some of biochemical parameters of synovial fluid have
been measured in routine joint evaluation. The purpose of the present study is to determine the physical, cellular and biochemical parameters of the synovial fluid of distal sesamoid bursa (DSB) and distal interphalangeal joint (DIPJ) of clinically normal Holstein cattle and comparison of measured parameters with obtained samples from those spaces of freshly normal cadaver feet collected from slaughter house. The mucinous precipitate quality was graded as good in predominant cadaver and alive samples. Viscosity of main specimens in both groups was in good grade. Predominant percents of both groups were transparent and remaining had transparent yellow color. Erythrocytes were not observed in both synovial fluid groups. Total nucleated cell counts (TNCC) of synovial fluid were 59.45±4.25 and 55.93±3.89 cells/μl (mean±SD) in DSB and DIPJ respectively in cadaver specimens. Also, TNCC in alive specimens were 69.80±4.74 and 67±6.25 cells/μl respectively in synovial fluids of DSB and DIPJ. So, there was no significant difference between specimens of DSB and DIPJ in each group and also there is no significant difference between TNCC of synovial fluids of mentioned joints in each group. Lymphocytes were the predominant cell type in cadaver and alive groups. The present results reveal that there is no significant increase or decrease in enzyme activities of synovial fluids of both groups. There were no significant differences between mean concentrations of total protein in slaughter and alive specimens. The glucose concentration of synovial fluids of both groups had no significant differences.

The effects of dietary Biotin supplementation on heel horn erosion in dairy cows

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Heel horn erosion "Slurry Heel" is a progressive destruction of heel horn commencing on the axial surfaces of the bulbs of the heels. It is one of the most common claw lesions and has been found that at least 50% of a herd can be affected with erosion of the heel. B-Vitamin, Biotin is one of a number of nutrients that are required for epidermal differentiation, production of keratin, and production of intracellular cementing substance within the claw wall. Administration of supplemental dietary Biotin has been shown to have a beneficial effect on hoof health and also has been suggested as a method of prevent lameness in cattle. This study was aimed to evaluate the effects of supplemental dietary Biotin on the severity of heel horn erosion. Trial was designed for a 4 month (June to September 2009) in a dairy located in Varamin in the Vicinity of Tehran consisted of 75 first lactating heifers as well as 210 milking Holstein Cows. Historically, the herd had a prevalence (> 45%) of clearly visible heel horn erosion in cows in their 2nd or later lactation. Seventy and five heifers assigned to a Biotin-supplemented (20 mg/head/d) and the 210 older cows on an alternating basis. Supplemented and control groups were housed in separate but identical free-stall barn with the same management. In every 7 day interval each cow was restrained in a trimming chute and the sole surface of each digit was examined for heel horn erosion. Scores for lesions were considered as: 0) Heel horn grossly normal, 1) Mild pitting or loss of integrity of heel horn, 2) Sever pitting of heel horn or shallow oblique V-shaped grooves, 3) Deep oblique V-shaped grooves, 4) Sever coalescing oblique grooves with heel horn nearly or completely absent. Chi-square fisher exact test was used to compare composited scores between groups. Heel horn erosion composite score were significantly different between Biotin-supplemented and control groups (1.01 ± 0.20 and 3.10 ± 0.15 respectively). Results suggest that supplemented dietary Biotin have prevention effect on the severity of lesions and the prevalence of heel horn erosion on herd levels.

The effect of lameness on husbandry records in very large scale dairy farms of Khorasan Razavi province-Iran

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Obviously, dairy cows play significant role in supplying society protein and dairy needs and along with population increase the important of efficient husbandry and keeping them will be more. Improvement of dairy cows husbandry involves various factors as: High diet quality, improve managerial conditions, better reproductive indices, parturition management, etc. Managerial conditions includes several subgroups: Diet management, litter management, etc Its clear which the topic of this study is related to lameness, litter indices and location. In addition, to litter quality and location, other determining factor such as metabolic problems are important in lameness incidence at industrial dairy cows. On the other hand, might be same as litter quality or even more. Dairy increase are such trouble in farms, made us selected this issue to research. Rising diet energy rate,